DOCUMENT RESUME

ED 255 645 CE 041 084

AUTHOR Maurice, Clyde; And Others
TITLE An Analysis of the Career Aspirations of Disadvantaged Students Enrolled in Vocational Education Programs. Final Report from July 1, 1982 to August 31, 1984.
INSTITUTION Florida State Univ., Tallahassee, FL. Dept. of Educational Leadership.
SPONS AGENCY Florida State Dept. of Education, Tallahassee. Div. of Vocational Education.
PUB DATE Jul 84
NOTE 169p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS Disadvantaged; Educational Counseling; *Educationally Disadvantaged; Employment Level; *Enrollment Influences; High Schools; Literature Reviews; *Minority Groups; National Surveys; *Occupational Aspiration; Parent Attitudes; Parent Influence; Questionnaires; Student Attitudes; Student Characteristics; Student Motivation; Student Recruitment; Two Year Colleges; *Work Attitudes

ABSTRACT

A study examined the career aspirations of disadvantaged students enrolled in vocational education programs. During the first phase of the study, the researchers reviewed the literature pertaining to the phenomenon of job aspirations as it pertains to or explains the disproportionate enrollment of disadvantaged students in low-level programs. Next, data were collected from 2,348 students from 29 secondary and postsecondary vocational and technical schools, and telephone interviews were conducted with 201 parents. These data pointed to four potential barriers to enrollment in high-level programs--parental influence, the prestige value of a student's occupational environment, the nature of the student's personal development, and sources of information for making educational choices. The following conclusions emerged from the study: the negative effects of disadvantagement are rooted in the experiences of students before they pursue vocational programs; the negative effects of disadvantagement are reinforced by the educational system; and recruitment procedures sometimes alienate disadvantaged clients. (Appendixes to this report include the survey instrument, descriptions of the data collection methods used during the study, and responses to 10 open-ended questions included on the survey instrument.) (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

FL8413202

ED255645

An Analysis of the Career Aspirations of Disadvantaged Students Enrolled in Vocational Education Programs

FINAL REPORT

Project No. DVE 3-2031

and

Project No. DVE 4-2031
From July 1, 1982 to August 31, 1984

Clyde Maurice, Project Director
Delcine Townes, Research Assistant
Rosalie Hill, Research Assistant

Comprehensive Vocational Education
Department of Educational Leadership
College of Education
Florida State University

The project reported herein was conducted pursuant to a grant from the Division of Vocational Education, Florida Department of Education. Contractors undertaking such projects are encouraged to express freely their professional judgments in the conduct of such projects. Points of view or opinions stated do not, therefore, represent the official position or policy of the Florida Department of Education.

CE 041 084

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

July 1984

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

D McQuat

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Acknowledgments

This project report is the culmination of two years of devoted service by a project staff whose assistance, dedication, and competence were invaluable to the success of the research effort. I wish to thank Max Zurko and Lydia Rydell: Max for his creativity, questioning posture and the endless hours he spent on the road collecting data; and Lydia for her flexibility, insightfulness and organizational skills. I would like to express my gratitude to data analysts Ellen Leddy and Linda Shrader for their willingness to work with a complex data base and their willingness to produce under frustrating circumstances and occasionally very short notice.

The co-authors, Delcine Towne and Rosalie Hill, provided dedicated assistance in instrument development, data collection and coding, and the development of a literature review. Their willingness to volunteer their valuable time and skills to the project even after financial compensation was not available is to be admired and deeply appreciated.

Thanks are extended to Lynn Ilon for her care and creativity in the production of the tables, and to Sue Flieder for her patience and skill in preparing them.

I am especially grateful to the personnel in the vocational schools and community colleges who made arrangements for students to respond to the questionnaire. I hope the results are of some use to them.

Table of Contents

		Page
Acknowledgments		iii
List of Tables		vii
List of Figures		ix
Chapter		
1	Introduction	1
	The Problem	1
	Purpose of the Study	2
	A Preliminary Examination of the Problem	3
2	Review of Related Literature	9
	The Nature and Characteristics of Disadvantaged Populations	10
	Deficits Emerging From Disadvantagement	11
	Conditions Which Engender Career Related Deficits	13
	The Development of Occupational Aspirations in the Disadvantaged	21
	Model 1	21
	Model 2	23
	Alternatives for a Vocational Development Process with Minimal Barriers	32
	Summary of Critical Factors to Explain Career Aspirations Under Conditions of Disadvantagement	34
	Social and Environmental Factors	35
	Significant Others	35
	Personal Ability and Characteristics	36
	Economic Factors	37
	Institutional Factors	37
3	Methodology	38
	Methodological Concerns	39
	Literature Review	41
	Instrumentation	43

Page

Sample Selection 44
Data Collection 46
Pre-Analysis 47
Data Analysis 47
Evaluation/Validation 48

Summary 48

4 Findings 49

The Distribution of Disadvantaged Groups in High and Low Level Programs 50
Pre-enrollment 52

Parental Influence 53
Prestige Value of Occupational Environment . . . 55
Nature of Personal Development 55
Sources of Information for Making Educational Choices 62
The Enrollment Decision 65

Program Participation 71
Employment Outlook 76
Content Analysis 86
Summary 89

5 Conclusions and Recommendations 90

Recommendations 91

References 95

Appendices

Appendix 1 Definitional Criteria 102
Appendix 2 Occupational Aspirations Questionnaire . . 104
Appendix 3 Procedures for On-Site Visitation 111
Appendix 4 Universe of Offerings in Area Vocational Technical Centers from which Programs were Sampled 115
Appendix 5 Universe of Offerings in Community Colleges from which Programs were Sampled 119
Appendix 6 Sample Selection for High and Low Level Programs by Program Areas 124

		Page
Appendix 7	List of Institutions which Participated in the Career Aspirations Study	126
Appendix 8	Programs Sampled from the Universe of Programs in Area Vocational Technical Centers and Community Colleges	129
Appendix 9	Code Development for Occupational Aspirations Questionnaire	134
Appendix 10	Personal Vocational - Occupational Characteristics - Question #17	137
Appendix 11	Specification of "Other" Responses by Response Categories - Question #4 . . .	140
Appendix 12	Specification of "Other" Responses by Response Categories - Question #8 . . .	145
Appendix 13	Specification of "Other" Responses by Response Categories - Question #1 . . .	150
Appendix 14	Specification of "Other" Responses by Response Categories - Question #18 . .	153
Appendix 15	Specification of "Other" Responses by Response Categories - Questions #9, #26, and #27	157
Appendix 16	Personal Vocational - Occupational Characteristics - Question #16	159
Appendix 17	Specification of "Other" Responses by Response Categories - Question #15 . .	162

List of Tables

Table		Page
1	Disadvantagement Status Compared by Program Levels . . .	51
2	A Comparison of Advantaged and Disadvantaged Students on Variables Related to Parental Influence on Career Aspirations	54
3	A Comparison of the Prestige Value of Occupations in the Environment of Disadvantaged and Non-Disadvantaged Students	56
4	Comparison of the Mean Self-Rating of Advantaged and Non-Disadvantaged at Different Program Levels in Dimensions Related to Career Aspirations and Academic Program Selection	58
5	Comparison of Identified Sources of Information for Pursuing Continuing Education (Advantaged/ Disadvantaged	64
6	A Comparison of the Reasons Why Advantaged and Disadvantaged Students Enroll in Vocational Programs	66
7	A Comparison of Advantaged/Disadvantaged on Desire to have Enrolled in Another Vocational Program	68
8	A Comparison of Advantaged/Disadvantaged Students and Reasons Why They Did Not Enroll in Other Programs They Considered	69
9	A Comparison of Advantaged/Disadvantaged Student Satisfaction in Their Current Program	72
10	Comparison of Disadvantaged and Advantage Students on Key Explanatory Dimensions	73
11	Comparison of Disadvantaged and Advantaged Students in High and Low Level Programs According to Key Explanatory Dimensions	75

Table		Page
12	Comparison of Disadvantaged and Advantaged in Low Level Programs on Key Explanatory Dimensions	77
13	A Comparison of the Postgraduation Plans of Advantaged and Disadvantaged Students	79
14	Comparison of Disadvantaged and Nondisadvantaged Student Identification of the Characteristics Necessary to be Successful in an Occupation	80
15	Comparison of Disadvantaged and Nondisadvantaged Student Identification of the Characteristics that they Desire in an Occupation	81
16	A Comparison of Advantaged and Disadvantaged on Source of Advice for Occupational Plans	82
17	Comparison of Identified Sources of Job Information to Utilize in Job Search (Advantaged/Disadvantaged) . .	83
18	Comparison of Anticipated Job Market Problems After Graduation (Advantaged/Disadvantaged)	85
19	Barriers to Adequate Program Selection as Derived from Analysis of Documents	87

List of Figures

Figure		Page
1	Schematic Diagram of Wisconsin Model of Status Attainment	18
2	The Genesis of Occupational Aspirations for Disadvantaged Youth	24
3	Occupational Development Concept for Disadvantaged Youth	28
4	Coping Behaviors	30

CHAPTER 1

INTRODUCTION

The Problem

In the last decade, progress in the area of equal opportunity has created the legal and institutional mechanisms to enable all individuals full participation in the social system. The nation had come to the realization that all individuals can be productive and should be given the opportunity to advance. Disadvantaged students were suddenly faced with a wide field of educational opportunity which was complemented by necessary support services so that these students could better themselves. While some students took full advantage of the opportunity, others did not.

Enrollment data show that the majority of disadvantaged students enter vocational education training programs primarily at the lowest levels. In support, related research has shown that most of these students do not aspire to more than subsistence level jobs. The problem is one of low aspirations and expectations among disadvantaged students that deter them from capitalizing on the educational opportunity afforded them. To the extent that these students can be successful in programs leading to high-paying occupations, then their participation

in low level programs represents a waste to society, a waste of their talents, and a denial of opportunity--self-denial.

Every effort must be made to understand and alleviate the problem. We live in an era where the unemployment rate for the disadvantaged is substantially higher than the norm, and in an era where the vocational educational system is continually and increasingly being accused of perpetuating class differences in our society. A responsible vocational education system must conduct the necessary self-examination to ensure that equality of opportunity is more than mere legislative idealism.

Purpose of the Study

The prime purpose of the study is to identify barriers to high-paying occupations as perceived by disadvantaged students. Specifically, the study seeks to accomplish the following objectives:

1. A thorough review of the literature to examine the phenomenon of job expectations or job aspirations as it pertains to or explains the disproportionate enrollment of disadvantaged students in low level programs;
2. Identification of reasons for low job expectations and aspirations among selected subgroups of disadvantaged students, specifically minorities, the socio-economically disadvantaged and the academically disadvantaged; and
3. Identification of barriers to high-paying occupations by each subgroup of disadvantaged students.

Essentially, this research effort will seek to acquire an understanding of the factors which contribute to the disproportionately high enrollment of disadvantaged students in low level programs.

A Preliminary Examination of the Problem

Though we are clear about the purposes of vocational education, and although we can select course content with much proficiency, the dynamics of students' choice of programs often elude us. This is not surprising since the choice of a vocational program by any student is the implementation of a lifetime of experiences which shape occupational values and perspectives. Because experiences are different for different individuals, and because they vary substantially for different subgroups in our society, the act of choosing an occupational program is a manifestation of individuality that is somewhat difficult to completely explain or control.

It is important, however, that students make an appropriate choice of vocational program to enable a smooth transition from school to work. The availability of vocational education in public schools helps students to make such a transition. But making that transition is by no means automatic; it requires some effort on the part of students. Before students enroll in programs, develop salable skills or seek employment, they must choose from a wide spectrum of vocational programs that differ in terms of academic requirements, status allocation, and probability of lucrative salaries after training. This decision to choose from a variety of vocational programs is a critical decision

in the educational experience of any student. Yet, inadequate and suboptimal choices are frequently made.

Although these choices may be inadequate, one has to empathize with such students since improper vocational choice is not an act of being irresponsible, but rather it is the result of a variety of factors which tend to shape the student's perception of jobs, and which certainly influence the selection of training programs. Such factors are documented by Roe (1956) who has evolved a theory of occupational choice which postulates that childhood experiences and the psychological climate created by the influence of early parent-child relationships influence the occupational choice of the individual. Even Holland (1966) noted that vocational choice is influenced by heredity as well as a variety of cultural and social forces which include peers, parents and significant adults. But while most theorists have subscribed to the influence of personal and environmental forces on occupational choice, other factors have been noted as having an effect on vocational decisions: for example, Tiedeman's (1961) ego identity and Super's (1957) self-concept, among others. The research on vocational choice has clearly demonstrated that an individual's experiences are significant in determining occupational preferences.

Different subcultures in our society, however, will have differential life experiences and, hence, will posess unique occupational choice characteristics. This is also clearly demonstrated in related research. The female, minority and disadvantaged segments of our society each possess unique characteristics which influence their decisions when selecting occupations or training programs. These

characteristics may tend to explain the low job expectations and aspirations of disadvantaged students.

The interest, curiosity and breath of occupational possibilities that females have in the preadolescent years are submerged by pressures of peer conformity, by interest, and by curiosity and anxiety about sex role expectations (Matthews, 1974). Matthews notes that at the secondary school levels females give little thoughtful attention to the vocational aspects of education that are unrelated to homemaking and "feminine" occupations. To do so will induce guilt about not conforming with societal role expectations. Even if this guilt is overcome, a relatively low level of occupational aspiration (career undershooting) still exists. This behavior is ascribed to occupational stereotyping, early childhood conditioning, fear of failure, fear of success and a variety of other subtle and blatant child-rearing and socialization practices" (Herr & Cramer, 1979).

But we cannot overlook the fact that there are females with high aspirations. However, they belong to a select subgroup. They are usually more intelligent, come from more advantaged homes, have been exposed to a maternal model of work competence and are more achievement oriented (Moore & Veres, 1976). Hence, the disadvantaged female is in a position of double jeopardy. Generally though, there are generic characteristics of females as a group that are applicable to all subgroups of the gender.

Likewise, there are characteristics of blacks that are generalizable to other racial minorities. Here, too, there are factors that can explain low career aspirations and expectations. Lo Casio (1967)

notes that "the career development of black students is more likely to be delayed or impaired than that of more advantaged populations,." This deficiency manifests itself in a variety of ways: the discrepancy represented by their choice of education and a career choice for which that level of education is inappropriate; a general lack of knowledge of alternatives; possible skill deficits; an unclear picture about themselves in relation to the world of work; and a constricted choice of curricula (Herr & Cramer, 1979). Smith (1975) summarized the research on the career development of blacks and has supported and extended Herr and Cramer's (1979) conclusions. He noted, among other things, that the average black lacks positive work role models, has a negative self image, has high aspirations but low expectations, and is vocationally immature. It is not surprising then that blacks and other lower class childrer set estimates of their ability to do school work lower than do white, upper-class children (Wylie, 1963).

Since disadvantagement is described as a "condition which prevents persons from being educated to the maximum of their genetic potential" (Herr & Cramer, 1979), females and minorities are disadvantaged, if for no other reason, because of the adverse conditions which inhibit their vocational development--conditions which, infact, result in sub-optimal career aspirations. Disadvantagement, although used here in its general sense to mean deprivation, creates a nurturing atmosphere which breeds low aspirations and expectations among all deprived sub-populations.

Gordon (1974) noted that disadvantaged students had motivation deficits which made it necessary to include re-motivation activities

in guidance programs. These deficits may have resulted from what Deutsch's (1962) observed in the disadvantaged child: lack of parental encouragement to achieve academically and poverty conditions which result in cognitive and learning deficits. As Deutsch further observed, learning deficits contribute to a lower self image and hinder a sense of competence. This is the heart of the problem, for as Edwards and Webster (1963) stated, favorable self-concepts are related to higher aspirations and academic achievement.

This brief overview aptly demonstrates that the choice of a vocational program (and, hence, an occupational track) is a complex one. Hence, the issue of barriers to high-paying occupations is not merely a question of what students perceive to be the hurdles that prevent them from obtaining high salary jobs. Occupational preparation must precede employment; and occupational choice and program selection naturally come before preparation. If the act of choosing is affected by the many factors as noted above, then understanding the barriers to opportunities for disadvantaged students to enter high-paying occupations reqires an understanding of the socio-economic and psychosocial factors which cause individuals to develop and exercise particular occupational choices.

This is the course that was taken in this investigation. There was a thorough review of the literature to abstract variables and concepts that can help explain differences in career aspirations, between advantaged and disadvantaged students and these concepts were used to secure information from students who attended vocational schools to ascertain the effect these factors may have had on their selection

of programs. The following chapter (Chapter 2) discusses that literature which was reviewed and summarizes the factors that seem to influence or explain the differential choice of programs among disadvantaged and advantaged students. Chapter Three (3) details the methodology that was used in responding to the central questions of the study; Chapter Four (4) presents and discusses the findings; while Chapter Five (5) discusses what the findings may imply for changes in the delivery of vocational education.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The prime purpose of this study is to identify the barriers to high-paying occupations as perceived by disadvantaged students. Since what students perceive to be barriers may not actually be the hurdles that exist, and since entrance to any "high-paying occupation" must be preceded by the selection of an academic program and the choice of an occupation, the real problem addressed by this study is securing an understanding of the dynamics of occupational choice as exercised by disadvantaged students. Essentially, this research effort was directed at acquiring an understanding of the factors which contribute to the disproportionately high enrollment of disadvantaged students in "low level" programs.

To accomplish this, it is essential to understand the nature of disadvantagement as well as the deficits which emerge from such a condition. More importantly, however, it is necessary to also understand the operational factors which result in the apparently suboptimal occupational and academic program decisions made by disadvantaged individuals. Consistent with this, the chapter is divided into the following sections:

(a) The nature and characteristics of disadvantaged populations;

(b) The deficits emerging from disadvantagement;

(c) Conditions which engender career related deficits;

(d) The development of occupational aspirations in the disadvantaged;

(e) Alternatives for a vocational development process with minimal barriers; and

(f) A summary of citical factors to explain career aspirations under conditions of disadvantagement.

The Nature and Characteristics of Disadvantaged Populations

There are many legal, psychological and social definitions of disadvantagement. Of whom do we speak when we refer to the disadvantaged in the field of education? Disadvantagement is described by Herr and Cramer (1979) as a condition which prevents persons from being educated to the maximum of their genetic potential. Such persons include racial minorities, the poor and socially deprived. These disadvantaged populations are primarily products of low socio-economic environments (Amos, 1968; Gordon, 1974) which are characterized by deleterious life conditions (Gordon, 1974). The conditions are, namely, poor housing, disorganized home and family, minimal parental motivation for youth, damaged and low self-concepts, and inadequate forms of social protection. Due to the economic and political structure in our society, the disadvantaged population typically becomes victims of "relative social disability," a position created by disproportionate distribution of resources, socially created barriers to opportunities and geographical isolation (Gordon, 1974). As a result, the experiences differ from that of white or middle class populations. These differences

are labeled by the literature as deficits. Individually and collectively, the deficits become important aspects of the disadvantaged individual's world in general (Amos, 1968, Stevic, et al., 1967), and his/her vocational self in particular. The following section describes some of the deficits.

Deficits Emerging from Disadvantagement

The conditions under which disadvantaged populations live create certain behavioral and intellectual deficits which ultimately affect their vocational behavior. These conditions result in poor communication skills (Amos, 1968); low academic achievement; low cognitive and learning skills; and deficits in attitudes, morals, and motivation (Gordon, 1974). All of these factors have been found to be important attributes of academic success and vocational maturity. When the deficits are coupled with the many environmental encounters resulting from few resources, minimal flexibility and few options, Gordon (1974) contends that the disadvantaged individual becomes overwhelmed because progress is inhibited and feelings of powerlessness emerge. As an outgrowth of these feelings, a number of behaviors and attitudes are displayed that have been associated (rightly or wrongly) with the nature of disadvantaged youth.

According to Amos and Grambs (1968), they include:

1. attitudes, behavior, motivation, aspiration and levels of responsibility that are encouched in resentment and hostility;

2. preoccupation with immediate needs (i.e., basic needs--money, food, clothing, and shelter);
3. increased distrust for others resulting from frequently experienced failure;
4. an apparent inability to grasp problems in the abstract;
5. apparent immaturity about financial matters;
6. a tendency to reject middle class criteria for achievement and to preserve their own concept of worth;
7. a tendency to associate the lack of success with limited opportunities in the labor force;
8. a preference for working with hands;
9. an aspiration to be their own boss;
10. a lack of social skills requisite in urban jobs;
11. aspirations for college attendance at rates that are not commensurate with that of other groups;
12. a tendency to express unrealistic ambitions; and
13. a tendency to be in an environment with a limited number of adult professional role models.

These characteristics in some instances overlap the characteristics of the "vocationally handicapped" as compiled by Smith (1975) from many studies of vocational behavior of blacks. According to Smith (1975) the "average black":

1. lacks positive work role models;
2. is not committed to a career as a way of life;
3. is work alienated;

4. prefers job security over self-fulfillment in an occupation;
5. possesses a negative self-image which fosters identity foreclosure;
6. has high aspirations and low expectations;
7. has limited occupational mobility because of race;
8. is vocationally immature; and
9. selects traditional occupational and academic programs known to blacks.

These characteristics can be easily traced back to the socio-economic environment and the constraints placed on its population due to the inherent characteristics of the environment. As was indicated earlier, the disadvantaged is victimized by his/her environment and the resulting behavior and attitudes are merely reflective. It is a popular notion among individuals who have concern for the plight of the disadvantaged in the emerging technological age, that the deficits to a large measure attribute to the propensity of disadvantaged students enrolling in "low level" programs, and consequently, the disproportionate representation in high level programs. However, it is not clear how these deficits translate into inappropriate program choice.

Conditions Which Engender Career Related Deficits

It cannot be assumed that the career-related characteristics and career inclination of any group are natural outcomes of membership in that group (i.e., racial minorities or economically deprived persons

do not possess certain characteristics and perspectives because of their minority group membership or their economic status). What does happen, for example, is that minority group membership aside, the individual uses group membership to compare him/herself with others. The comparisons can be damaging. Thus, the black may have low esteem, for example, not because he is black, but because he is more likely to be an occupational failure because of prejudice and discrimination against blacks (Rosenberg, 1979). The reactions to persons of derogate groups shape and influence the values and perceptions of the individuals. Hence, the problems of career aspirations of the disadvantaged can best be understood by recognizing the variety of factors that influence the characteristics and choices of the individual.

The works of Murray (1938), Super (1957), Ginzberg (1957), and Gottfredson (1981) contend that individual behavior and perspectives are shaped from infancy to adulthood by the experiences gained from interacting with one's environment. Roe (1956) probably presented one of the most important theories concerning the effects of the environment in early childhood experiences. According to Roe, the adult (including parental) behavior is important to shaping personality. The three primary practices in this regard, include (1) emotional concentration on the child, (2) avoidance of the child, and (3) acceptance of the child. Roe contends that the shaping of individual styles and behavior, ultimately affects vocational choice. Thus, the early years are important to the occupational development process (Ginzberg & Associates, 1957; Gottfredson, 1981; Roe, 1952).

To the extent that disadvantaged children are subjected to negative childhood influences, they may experience retardation in the process of occupational development. Literature in the social sciences aptly support the position that the environment of minority and low income families generally produce fewer positive influences during their childhood experiences for supporting career development than other populations. Thus, career related deficits commence early in their lives.

The behavior of minorites and low income populations have also been associated with the environment. Gordon (1974) and many other theorists have postulated that human behavior, including academic and vocational performance, is crucially influenced by environmental encounters. The impact of the "environmental press" on the experiences of the disadvantaged is a phenomenon frequently mentioned in the literature, even though not always isolated from questions of genetic origin.

Parents, schools, and neighborhoods have been identified as environments that reinforce some behavior more than others (Gottfredson, 1978, Holland, 1966). Sewell and Hauser (1980) are noted for findings that have been significant in relation to this proposition in their study which began in 1957 of 10,317 seniors in the Wisconsin school system.

The study focused on the influences of community and neighborhood background on the educational aspirations of youth. The study focused on (a) socio-economic origins and measures of academic ability as major factors in educational aspirations of youth, and (b) the tendency for

females to have lower aspirations than males. Both of these assumptions had been verified by previous research. Sewell and Hauser (1980) concluded that (a) students found it difficult to escape the effects of their socio-economic origins in the attainment of higher education, and (b) that at every stage of the higher education process, the effects of socio-economic background operated independently of ability. Yet, at the high school level, socio-economic status had no effect on performance, independent of measured ability.

Socio-economic status also directly and indirectly affected "perceived encouragement from significant others and educational and occupational aspirations" (p. 71). In this regard, some effects of the socio-economic background were independent of ability and goals. Yet, most of the effects on educational attainment were mediated through their influence on the perceived encouragement of significant others and on educational aspirations. Thus, socio-economic background affected aspirations directly and indirectly, through their effect on parents and peers. Concomitantly, "Parental encouragement is a powerful intervening variable between socio-economic class background and intelligence of the child and his educational aspirations" (Sewell & Shah, 1967, p. 559).

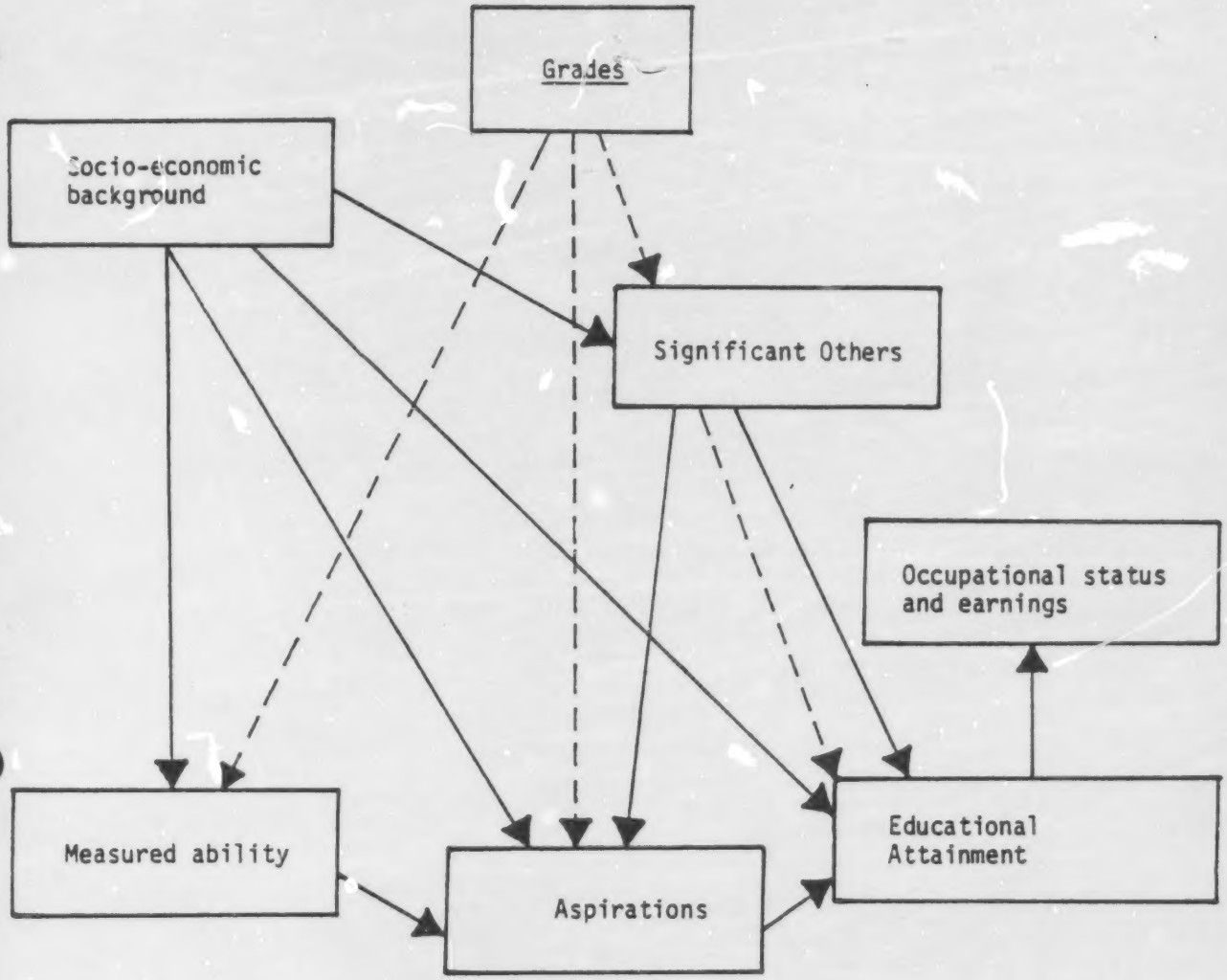
Sewell and Hauser (1980) disaggregated socio-economic status into father's education, mother's education, father's occupational status and parent's income. They found that each of these variables "had an approximately equal effect on educational attainment and on all the intervening variables in the model" (p. 73).

There were "substantial effects of ability on occupational status both directly and through grades, significant others and educational occupational aspirations, but particularly through education" (p. 74). As expected, education, to a large measure, directly affected occupational status and both educational and occupational attainment largely and directly affected occupational aspirations and ultimately earnings (see Figure 1).

Sewell and Hauser's findings significantly support the conclusion that the socio-economic background, based on its potential for affecting educational and occupational attainment, is a crucial factor in the vocational development process. In this regard, it can and does create deterrents or barriers to vocational decision making. The fact that the disadvantaged individual's socio-economic background is derelict is one that sets the disadvantaged apart from the non-disadvantaged. Moreover, as discussed above, it has a high propensity for creating barriers and obstacles to the vocational development.

There are studies that also depict the relationship of social class and aspirations. Rodman and Voydanoff (1978) found the level of aspirations to be positively related to the social class of the parent, and Haller and Butterwork (1960) found it to be related to the situation in which the individual is reared. More specifically, Rodman and Voydanoff (1978) found that "social class factors exert more influence upon aspirations as blacks acquire experience in the educational and occupational worlds" (p. 341). Further, it was found that the aspiration level of lower class, working class, and middle class are similarly high at an early age, but become more differentiated

FIGURE 1



Schematic Diagram of Wisconsin Model of Status Attainment

(Sewell and Hauser p. 72)

by social class as the individual matures. This could logically be due to the fact that as the individual matures, he/she has more encounters with his/her environment. For the disadvantaged, these encounters are more deterring than encouraging. Moreover, Rosenberg (1979) contends that as a child becomes older, he/she becomes increasingly conscious of economic inequities. Moreover, the meaning of social class is interpreted within frameworks that are different for children than for adults, primarily because they relate to interpersonal experiences. In this regard, "the actual experience of an adult in the world of work, inevitably calls his attention to his place in a recognized stratification system" (Rosenberg, 1979).

The findings of the aforementioned studies suggest that perhaps the disadvantaged or lower class individual is better characterized by high aspirations and low attainment which to a large measure is impacted by his personal experiences with his environment. This notion does not fully support the assumption undergirding this review that disadvantaged and low socio-economic class individuals had low aspirations which is the basis for low expectations and attainment with respect to occupational and educational achievement. Experiences with the environment, and not necessarily low aspirations, may account for low expectations and attainment.

Gottfredson's (1981) findings further challenge the basic assumptions of this study by observing that the same general patterns of development and differentiation in aspirations have been found for blacks as for whites. Gottfredson (1981) contends that "many of the racial differences reported in the vocational literature were probably

due to the frequent failure to control for differences in social class and intelligence" (p. 563). Gottfredson's review of the research and anomalies found that a number of distinguishing factors related to the disadvantaged and advantaged relates to social classes. The findings indicate that:

1. within ability groups, the higher social class youngsters have higher aspirations (p. 562);
2. lower class children tend to orient to the lower class and adopt its standards for success, as does the middle class child orient to middle class standards (p. 563);
3. lower class and lower ability youngsters aspire to lower level jobs more than other youngsters, even though they share the same images about which jobs are desirable (p. 564); and
4. parents have and youngsters adopt different views about what an acceptable job is for people like them and these views are akin to the social level (p. 563).

Gottfredson's findings support the notion that typically individuals accept, and respond in a manner acceptable to the values and standards of his/her social class. Thus, social class is a distinguishing factor between disadvantaged and advantaged population. Logically, social class could be a deterrent associated with exercising appropriate occupational choice, and therefore could foster a potential explanation for high or low level vocational program selection among disadvantaged and advantaged students.

The Development of Occupational Aspirations in the Disadvantaged

From the foregoing analysis, it is clear that the literature associates vocational aspirations and choices with socio-economic conditions, as experienced in the physical and social environment. Such conditions determine socio-economic status, and ultimately the barriers/-deterrents to academic and vocational aspirations. The literature also suggests that the barriers increase as the experiences with the environment increases. Therefore, understanding the process by which occupational aspirations develop is important to determining when barriers invade the process, and is essential to developing precautionary measures to stem the ill-effects of deficient socio-economic conditions. This section discusses two conceptual models to describe the development of career aspirations among disadvantaged populations. Each model tries to point out in a broader context the source of deterrents to making appropriate career decisions.

Model 1

There are critical components of information to explain how socio-economic status results in low career aspirations. The conceptual model discussed in this subsection identifies these critical components to demonstrate the source of deterrents. Deterrents may conceptually be viewed as an outgrowth of the socio-economic conditions with which one interacts. Given this concept, deterrents may be categorized under two main headings: environmental and personal. Environmental deterrents are aspects of the social, economic or physical context which directly or indirectly affect career aspirations. For example, the

values of an individual's social class will be an environmental deterrent. A personal deterrent, on the other hand, is a condition possessed by the individual which may affect carrer aspirations. Sex role, for example, is a personal deterrent.

These deterrents may be further characterized as being assigned or imposed. Assigned deterrents are those over which the individual has no control and are closely linked to the social class or genetic characteristics of the parents. These include assigned environmental deterrents such as social and economic class or geographic origin and culture; they may also include assigned personal deterrent such as race. Imposed deterrents result form external influences and are capable of being changed with exposure to and acceptance of other influences. These deterrents are associated with values, occupational and educational attainment, status and perceptions of significant others, primarily parents; but may include role models, teachers, and intra-class peer groups.

Personal deterrents disaggregate into elements of the individual's personal conditions which are assigned, as well as attitudes and experiences (or the lack thereof) which are imposed. Deterrents associated with personal characteristics that are assigned include race, sex role, measured ability and career maturity. Those associated with attitudes which are imposed include self concept/image/esteem, foreclosure, predetermination, perceived consequences (including the fear of failure, perceptions of success and perceptions of work values. Imposed environmental deterrents are associated with experiential factors which can include minimum academic achievement and exposure, insufficent

information, minimal interaction with and knowledge of helping agents (e.g., counselors), social disability, limited or unobtainable training, few occupational options and opportunities.

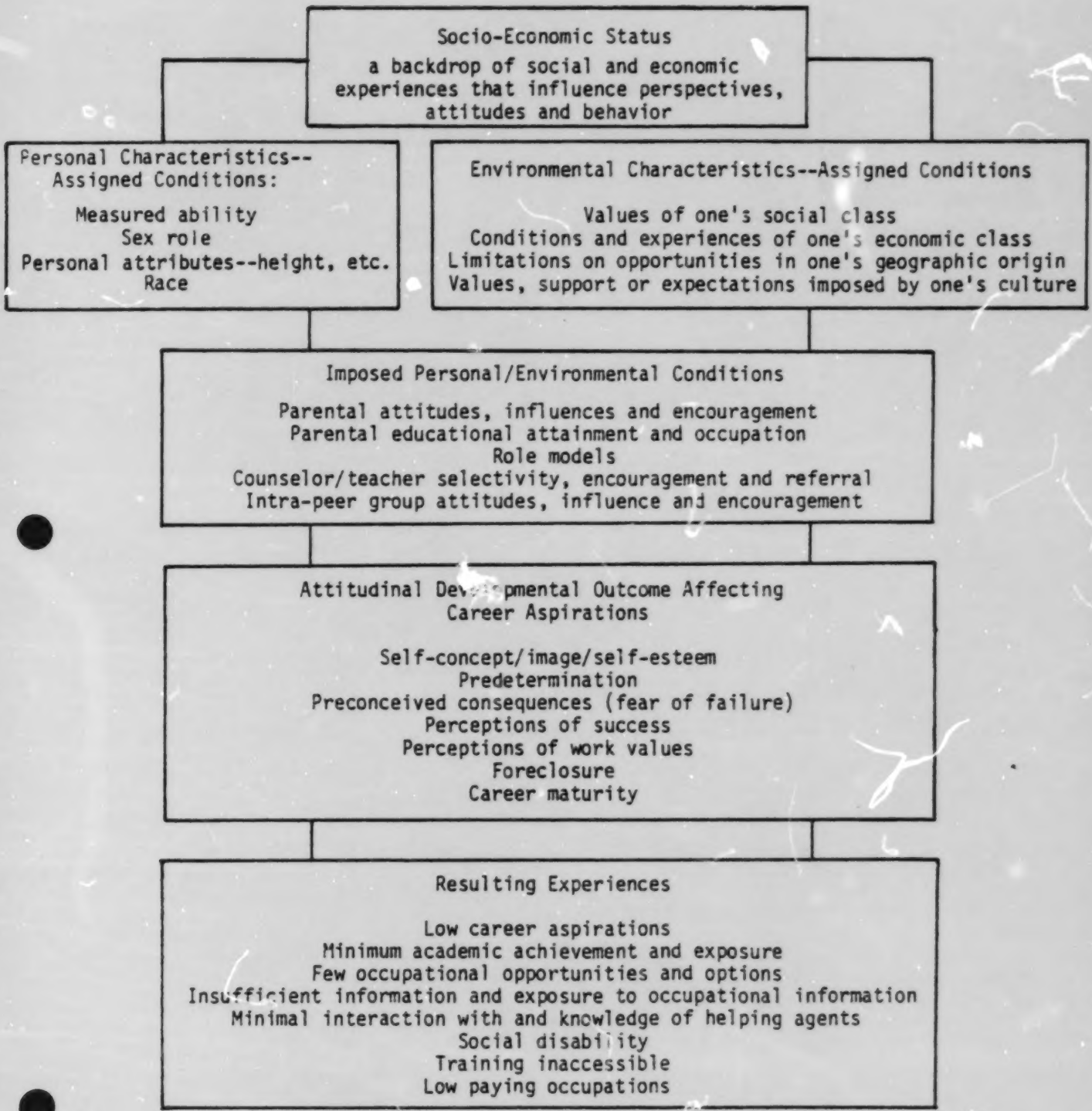
The illustration in Figure 2 on the following page shows schematically how socio-economic status can result in negative career inclinations for the disadvantaged. The assigned and imposed conditions in the social-economic environment create negative attitudinal or developmental characteristics which result in ineffective career exposure.

Model 2

Gottfredson (1981) developed a concept of occupational aspirations that resulted from an extensive review of findings and anomalies that shed light on the occupational aspirations and vocational choice behavior of lower-class, and lower-ability children. The theory capitalized on self-concept development during early childhood and adolescence years, and as an experiential process, linked with social abilities and sex. It projected a continuum that progresses from self-concept through occupational images, occupational preferences, aspirations and vocational choice. Drawing from the concepts of Gottfredson (1981) and Super (1953) and the literature supporting the importance of the socio-economic status and self-concept in the vocational development process, the aspirational development of the disadvantaged may be viewed schematically. The concept focuses on development that originates during early childhood. It assumes that there are phases which are each dependent upon the other, and recur as it needed, but do not necessarily occur in isolation.

FIGURE 2

The Genesis of Occupational Aspirations
For Disadvantaged Youth


Socio-Economic Status
a backdrop of social and economic experiences that influence perspectives, attitudes and behavior
Personal Characteristics--Assigned Conditions:
Measured ability
Sex role
Personal attributes--height, etc.
Race
Environmental Characteristics--Assigned Conditions
Values of one's social class
Conditions and experiences of one's economic class
Limitations on opportunities in one's geographic origin
Values, support or expectations imposed by one's culture
Imposed Personal/Environmental Conditions
Parental attitudes, influences and encouragement
Parental educational attainment and occupation
Role models
Counselor/teacher selectivity, encouragement and referral
Intra-peer group attitudes, influence and encouragement
Attitudinal Developmental Outcome Affecting Career Aspirations
Self-concept/image/self-esteem
Predetermination
Preconceived consequences (fear of failure)
Perceptions of success
Perceptions of work values
Foreclosure
Career maturity
Resulting Experiences
Low career aspirations
Minimum academic achievement and exposure
Few occupational opportunities and options
Insufficient information and exposure to occupational information
Minimal interaction with and knowledge of helping agents
Social disability
Training inaccessible
Low paying occupations

Self-concept development - is a continuous process. It is a process by which one learns to recognize and respect one's personal characteristics and appreciate one's abilities. As the individual matures, personal characteristics and self-appreciation begins to crystallize, and the indivdiual is in the process of developing an active self-concept. It is during this phase that the "assigned" personal characteristics are defined and take on meaning. During this phase, the individual is probably most vulnerable to interaction with significant others and environmental institutions. Since significant others have great potential for imposing barriers, this phase consequently takes on significance with regard to imposed deterrents.

Occupational images - Through this phase, the individual learns to recognize the characteristics and roles of others (Gottfredson, 1981). He/she tunes into life styles, including occupational life styles, and consequently the magnitude of the environment. During this phase attitudes begin to formulate, and therein lies the special significance to the disadvantaged with regard to attitudinal deterrents. If occupational debilitating attitudes are formulated, then occupational aspirations and choice will be suboptimal.

Occupational preferences - During this phase, the individual links himself/herself to others and distinguishes relationships and compatibility as reflected in values, desires and motivation (Gottfredson, 1981). It is the stage where individuals begin to formulate answers to what they want to be and do when they grow up. During this phase, individuals may be significantly impacted by assigned deterrents (i.e., sex, age, intelligence, socio-economic status, race and geographical

region). This is important in light of studies that have shown that lower-class tend to have more sex-typed views of occupations.

Aspirations - This phase is a pivoting point in the process of occupational development. Individuals based on their perceptions about the accessibility of their preferences, develop expectations and as a result may set goals or refrain from doing so. The accessibility of the occupational aspirations (or some desired work role) is an important factor, and is determined by personal attainment where necessary, as well as social circumstances. One must be aware, however, that there are circumstances or societal dictates that may distort these expectations. For example, Drucker (1969) credits technological advancement (i.e., television) for being a leading distorter. According to Drucker, the disadvantaged child may learn too much for television, since the child spends so much time with the television and so little time with other experiences. He further suggested that the television experience accounts, to a large measure, for the high expectations and the low levels of literacy found among disadvantaged individuals. High expectations and illiteracy are incompatible situations, and result because of an accumulation of assigned and imposed, personal and environmental deterrents that impede success when testing for reality. Reality testing is essential in developing realistic career aspirations.

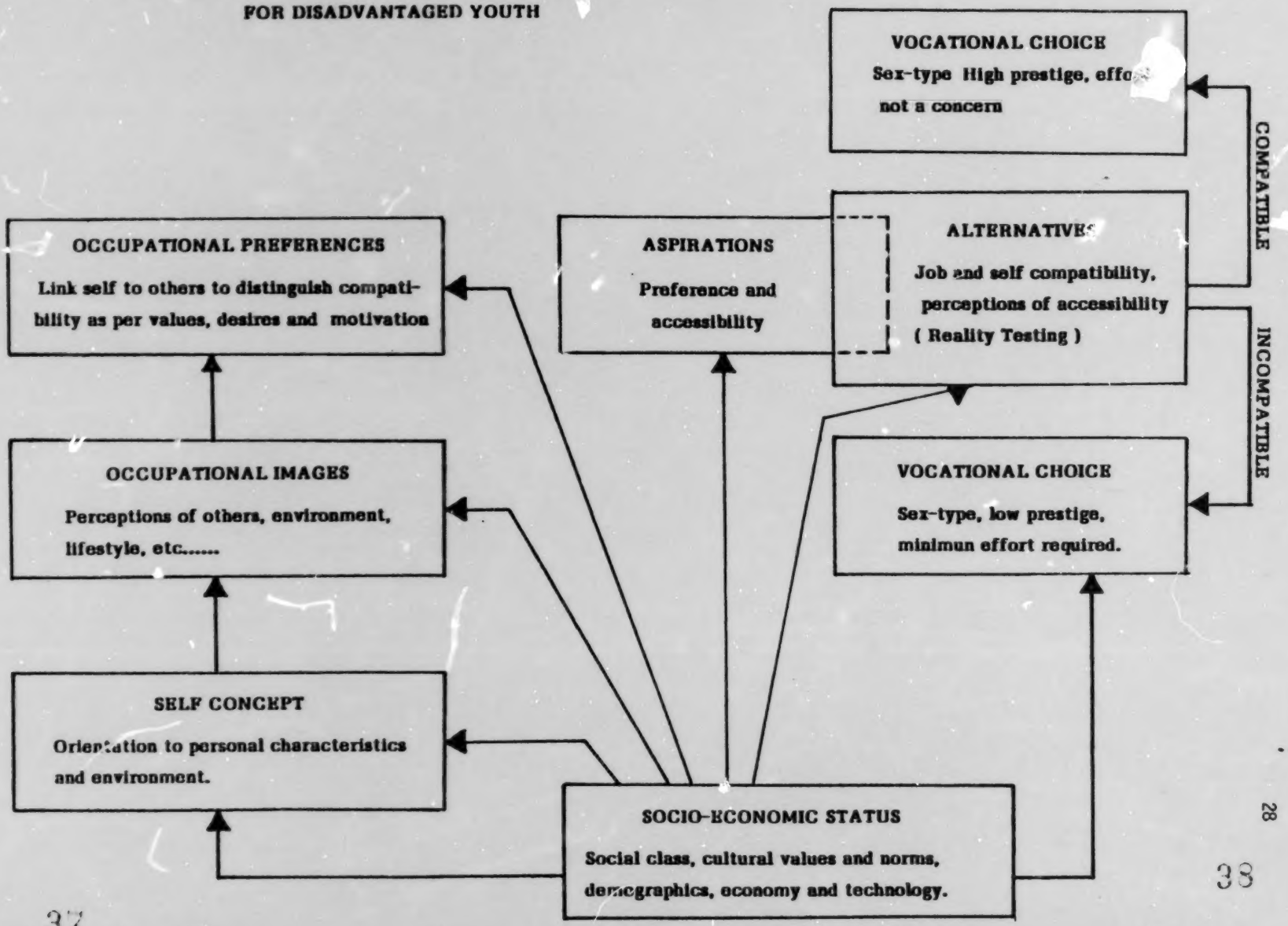
Alternatives - This phase overlaps with the aspirational phase. It is a process of reality testing. Consequently, it is the point of which determinations are made about whether experiences are compatible with expectations. During this phase the individual becomes increasingly aware of personal limitations as well as environmental

constraints. This phase may emerge in response to fulfilling an urgent need. In this regard, Herr and Cramer (1979) contend that "the strength of a particular need, and amount of delay between the arousal of the need and its satisfaction, and the value that the satisfaction has in the individual's environment are the conditions--shaped by early childhood experiences--that influence career development" (p. 88). Hersey and Blanchard (1982) complement this thinking by contending that a need tends to "decrease in strength if it is either satisfied or blocked from satisfaction" (p. 16). Their need-blockage concept postulates that when goal attempts are continued without success,the individual may substitute goals that can satisfy the need, and thus develop coping behavior as is graphically illustrated in Figure 3.

Hersey and Blanchard's concept explains somewhat the interaction between aspirations and alternatives and provides an explanation for the reversed aspirational levels of disadvantaged individuals who are adversely impacted by their environment. It also provides a way of viewing the dynamics of experiences attendant to the disadvantaged students' interaction with two environments. In this regard, it has been observed that the disadvantaged individual is exposed to the middle class environment of his/her school setting by day, and consequently developed expectations which emerge as learned behavior. However, the disadvantaged individual, who does not recognize his socio-economic constraints when attempting to apply this learned behavior in the middle class setting may encounter blockage. Similarly, the disadvantaged individual who attempts to exemplify middle-class behavior in lower-class environments when he/she returns home may also encounter

FIGURE 3

OCCUPATIONAL DEVELOPMENT CONCEPT
FOR DISADVANTAGED YOUTH

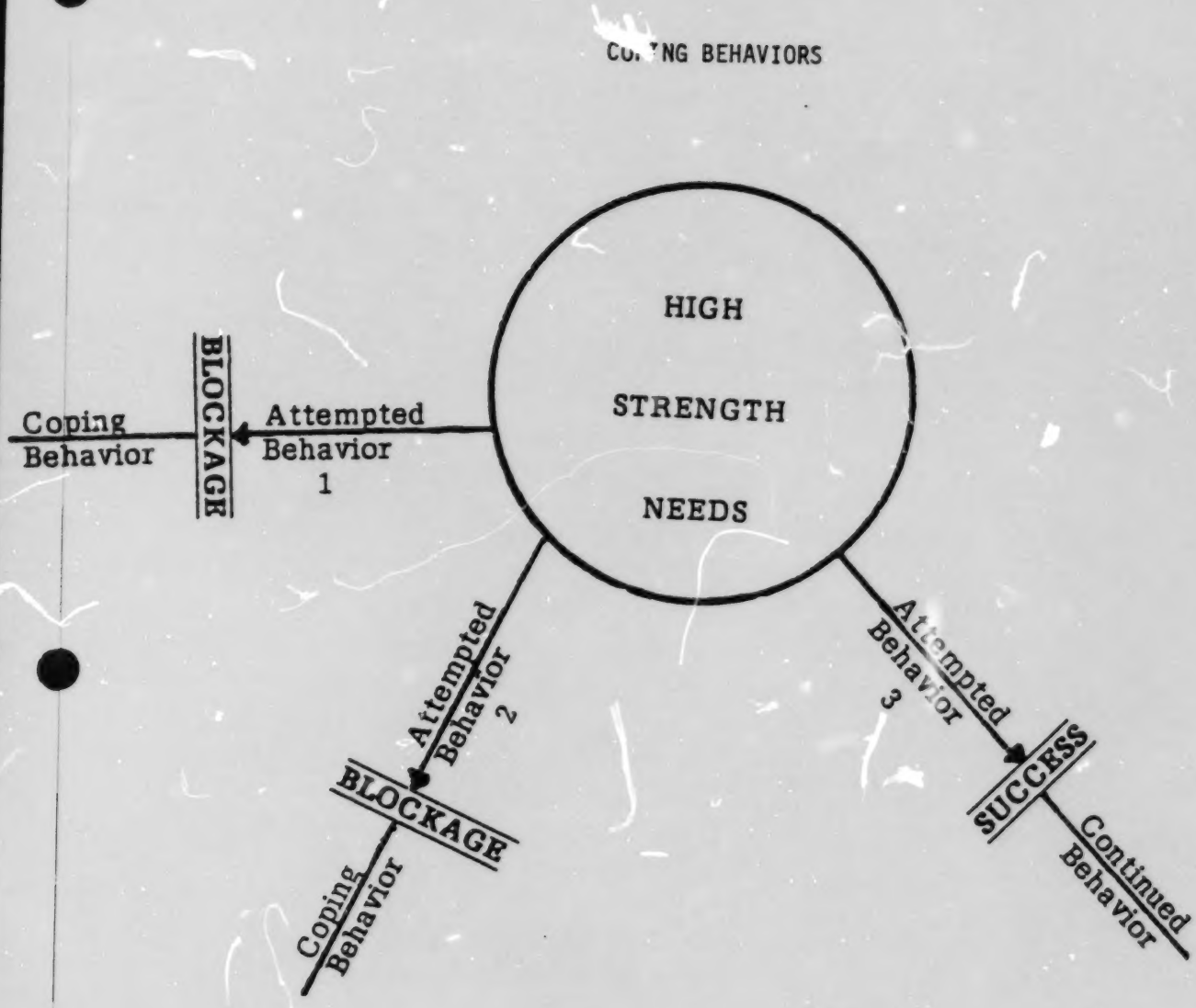


blockage. Consequently, if the behavior is not rewarded or reinforced, the results are the same. Thus, coping behaviors in the form of regression, rationalization, fixation and resignation are exhibited (see Figure 4).

Vocational choice - During this phase, individuals make determinations that evolve from a refinement of prevailing perceptions, attitudes and experiences from the previous phases. Thus, with regard to the disadvantaged individuals, these determinations may be derivatives of coping behavior in response to the various deterrents. The choices may be more congruent with immediate needs. Applying the Maslovian theory, these needs can include a goal to satisfy a security need, self-actualization need or somewhere inbetween. Sewell and Hauser (1980) suggest that choices may be linked to opportunities available based on one's educational attainment, measured ability, and aspirations; all of which are significantly influenced by the socio-economic background. Gottfredson (1981) contended that choices are also moderated by sex-type, prestige and effort required, when major considerations about alternatives and compromise enter into the process. Galinsky (1966) ties this phase back to the self-concept with the assertion that it makes the choice easier. Thus, choosing an occupation is an implementation of one's self-concept (Korman, 1966), and "the self may change . . . as it interacts with its environment" (Super, 1963, p. 17).

Alternatives - "The environment . . . of any particular person defines the range of alternatives available as well as the value complex which he is likely to apply in his ranking of those choices" (Herr

Figure 4



Hersey and Blanchard 1982, p.17

& Cramer, 1979, p. 81). The literature suggests that disadvantaged populations "either being forced to accept or they are willing to accept the vocational patterns the class system holds out to them" (Hollingshead, 1949, p. 287). These patterns are characterized by limited opportunities, limited flexibility and few resources. Even within this scenario, Rodman and Voydanoff (1978), based on their research, projected that "to the extent that lower class individuals have a wider range of aspirations, with a peak as high as the middle class peak, there is a built-in potential for mobility . . ." (p. 342).

This proposition, however, is only as good as is the individual's capability for broadening his/her aspirations and changing his/her perceptions about the accessibility of opportunities that are available. However, as Herr and Cramer (1979) have indicated, the environment dictates the terms under which these may be accomplished. Therefore, in order to change the perceptions of the disadvantaged, the environment offers some sense of certainty about the provision and attainment of opportunities. Therefore, while change is recommended, it can be affected only to the extent that the individual's environment changes, or to the extent the individual is capable of fitting into other environments.

It is obvious from the models presented, as well as from the foregoing discussions about the nature and deficits of the disadvantaged, that the socio-economic status and accompanying environment are the primary deterrents to the aspirations, alternatives, and vocational choices of disadvantaged individuals. Further, as disadvantaged individuals compare themselves with members of other groups, their

concept of self is lowered, not because they are black or female, but because of the disdain that society projects toward them and as a consequence, the likelihood of their occupational failure (Rosenburg, 1979). While it is recognized that the environment of the disadvantaged individual is overwhelming, it is also recognized that viable alternatives are essential in order to enhance the quality of their vocational development.

Alternatives for a Vocational Development Process with Minimal Barriers

The literature presents a number of suggestions as possible alternatives for creating a more positive and barrier-lessened vocational development process for disadvantaged individuals. These include: (1) changing values to change aspiration levels; (2) creating a system that matches one's life style, thus matching people with occupations and occupational environments that match their personality characteristics (Holland, 1959); (3) improved delivery techniques and strategies to foster vocational development (Gottfredson, 1981; Smith, 1975) to include: (a) using tests inventories, etc., to assist the individual in discovering and verifying interests, abilities, and personalities; (b) assessing ability for diagnostic purposes; (c) assisting with goal explorationa nd related standards to be filled; (d) assisting with developing and improving information gathering skills; and (e) rethinking the counselor's role and views about counselor ethics; (4) creating career guidance programs that deemphasize correlations between socio-economic membership and success and recognize individual

competence and desire as criteria by which information should be provided (Herr & Cramer, 1979); and (5) developing a system that emphasizes that learning experiences and task approach skills are instrumental in producing preferences for activities (Herr & Cramer, 1979). This approach recognizes the dynamics of complex environmental factors that are beyond the control of the individual and affects decisions and choices.

These approaches should not be considered to be exhaustive and it should be remembered that they all fall short in providing an immediate impact upon the intra-culture values and beliefs held by families and peers of disadvantaged individuals. Therefore, it should not be expected that this matter can be addressed effectively through short range goals.

The approaches, however, are applicable throughout educational systems at all levels. They have significant implications for instructional and academic support staff. They would probably work best with improved information processes, and unbiased information sources. They focus on opportunity attainment, unbiased intervention on the part of helping agents, a change in measurement of occupational readiness that emphasizes capabilities and learning experiences, and deemphasizes socio-economic status. In short, these approaches suggest unencumbering the experiences of the disadvantaged individual by negating the effects of factors not relevant to personal growth and development.

In the absence of deliberate attempts by the school system to ensure that students pursue opportunities that are consistent with

their genetic potential, we will have to assume that students do not decide what programs they would enter. They are processed through an environmental maze, and receive the sociological, psychological and economic conditioning that more or less ensures program participation that perpetuates the existing class structure. Under such circumstances we cannot speak of vocational education opportunities for all who can benefit. Moreover, under these circumstances the school becomes a discriminatory agent instead of a provider of opportunities.

If the foregoing is an accurate conclusion, it is conceivable that the educational system is secure in the knowledge that with respect to disadvantaged students, what was done in the past, will work in the future. This notion is no more viable than the notion that work in terms of the occupational structure of the past and present is realistic for occupational opportunities of the very near future. Minority groups and other disadvantaged groups "have equally serious problems in overcoming past-oriented occupational stereotyping . . . their image of their place in the future is critical to the determination of their future; educators have a strong role in helping them shape that image" (Maton, 1976, p. 247).

Summary of Critical Factors to Explain Career Aspirations Under Conditions of Disadvantagement

In order to assist with developing an approach to helping to shape the image of the disadvantaged, a series of factors which can contribute to an explanation of the career aspirations of the disadvantaged was summarized (see Appendix A). These factors are enumerated under various

categories, within which specific aspects of the behavior of the disadvantaged could be discussed and understood. They formed the basis for the development of a survey instrument that was used to collect data from students who were enrolled in vocational programs.

The barriers and concerns derived from the literature provide a basis for analyzing the data and a basis for understanding the program and occupational choices of the disadvantaged. They are associated with major factors, namely, social and environmental, significant others (including parents and other role models) personal ability and characteristics, economic and institutional. The specifics are as follows.

Social and environmental factors:

* The socio-econmic background is difficult to escape in the attainment of higher education and operates independent of ability at every stage of the higher education process.
* Lower class children adhere to low class standards for success; they aspire to lower level jobs more than other social classes, even though they share similar images about success.
* The socio-economic background directly and indirectly affects the individual's perception of the kind of encouragement received from significant others as well as his/her educational and occupational aspirations.

Significant others:

* Parental encouragement is a powerful intervening variable between socio-economic class background and intelligence. For example, educational attainment is dependent somewhat

upon the influence of perceived encouragement of significant others.

* Since parents and youngsters adopt different views about what are acceptable jobs, there is the potential for conflict for the child making educational and occupational decisions.
* Minorities and low economic individuals lack positive work role models. This void limits the range of occupational images to which they are exposed, and affects their occupational attitudes and development.

Personal ability and characteristics:

* The average black has a negative self-image, high aspirations and low expectations. Their poverty conditions give rise to cognitive and learning deficits; the learning deficits contribute to lower self-image and hinder the sense of competence.
* With regard to the career choices of the disadvantaged, there is a general lack of knowledge of alternatives, possible skill deficits and an unclear picture about themselves in relation to the world of work. They tend to make career choices that are incompatible with their educational choices.
* Blacks are also more likely to be an occupational failure because of prejudicial attitudes and discriminatory acts against blacks. Consequently, they develop low esteem as a result of the impact of these attitudes and actions

rather than because of their race. Ultimately, they are vocationally handicapped.

* Disadvantaged clients are preoccupied with immediate needs, namely, food, shelter, clothing, and money.

Economic factors:

* Economic factors function as barriers where the disadvantaged does not have the necessary funds to participate in training or employment, e.g., fees, transportation. Associated with the economic factors are labor market factors which pose hurdles to employment primarily as a result of induced occupational failure resulting from prejudicial and discriminatory acts.

Institutional factors:

* Institutional factors impose barriers when the policies of educational entities cause certain subgroups, because of personal social, or economic characterizations, to be more privileged than others.

These critical factors, individually and collectively, shape and influence attitudes, values and perspectives that are detrimental to career decision making and impose limitations to preparing for occupational roles.

CHAPTER 3

METHODOLOGY

The project as originally conceived was intended to identify the perceived barriers to high-paying occupations as identified by disadvantaged students. The research direction was based on the observation that a disproportionate number of disadvantaged students were enrolled in lower level vocational programs. It was assumed that enrollment in lower level programs will lead to the acquisition of jobs that are not considered "high-paying" occupations. It was further assumed, that if those individuals expressed their reasons for enrollment in such programs, then measures could be taken to promote the enrollment of disadvantaged clients in programs that would lead to more lucrative jobs. The latter assumption, although plausible, is somewhat weak if it were to be used for such a remedy. The students' perception of barriers or their notation of the reasons accounting for their enrollment in lower level programs may not reflect the complexity of the occupational decision-making process. The barriers that students perceive may not account for the variety of personal and environmental influences that can be brought to bear in the decision to enter a program or an occupation.

Given this basic concern, the project was conducted in a manner so as to derive the widest array of defensible evidence which could

be used in understanding the dynamics of occupational and educational choice among disadvantaged students. Efforts were also made to elicit the type of information that could be the basis for planning intervention strategies to ensure that disadvantaged clients have the opportunity to pursue academic programs in which they can be successful.

This chapter details the procedures used in responding to the objectives of the study. The discussion is organized into eight subsections, each addressing some aspect of the research effort which culminated in the accomplishment of the research objective. These subsections are entitled as follows: (1) methodological concerns; (2) utilizing existing knowledge--the literature eview; (3) instrumentation; (4) sample selection; (5) data collection; (6) preanalysis; (7) data analysis; and (8) evaluation/validation.

Methodological Concerns

There were several concerns which formed a basis for the methodological approaches selected. These concerns are enumerated and described below with some indication of the subsection of the methodology in which they were addressed. The concerns are as follows:

Defensible evidence: As noted before, data on individuals' perception of barriers were not sufficiently valid to enlist any confidence in attempting to implement measures that would remedy the situation for disadvantaged clients. Any data that would support intervention had to be theoretically rooted and statistically defensible. In the literature review, instrument development and data analysis aspects of the methodology, measures were taken to assure a degree of

defensibility that was beyond the mere specification by disadvantaged clients of barriers to high-paying occupations.

Representation of theoretical content: The phenomenon of career aspirations is not a new area of inquiry among educators, psychologists and other social scientists. Several investigations have been conducted in the areas of career development, career aspirations and other content areas that can be directly or indirectly brought to bear on the topic addressed by this report. Adequate representation of the theoretical content was important. It was essential to develop some preliminary theoretical understanding of career aspirations of the disadvantaged before any attempt was made to collect data or make any conclusions regarding the barriers to adequate program selection or entry into high-paying occupations. The literature review aspect of the research effort attempts to secure adequate representation of theoretical content.

Program representation:. An adequate sampling of programs had to be represented as the source of empirical evidence. There is such a diversity of vocational programs in the State of Florida (as in most states) that generalizable judgments could not be assured unless some of the diversity was captured in the procedure for sample selection. Diversity results from the fact that programs are offered at community colleges and area vocational technical centers; programs have different levels of technical content; they attract different populations; and in many cases, they reflect the business and industrial structure of the immediate community. To the extent that the dynamics of the behavior of disadvantaged clients are associated with some of the unique

characteristics or geographic location of programs, the description of their career aspirations will be incomplete without adequately representing the array and diversity of programs. The sampling strategy accommodated this concern.

Population representation: The study is primarily concerned with the career aspirations of disadvantaged students. This, however, does not mean that the sample will be comprised solely of disadvantaged clients. A more in[illegible] understanding of the behavior of disadvantaged clients could [illegible]e der[illegible] by comparing them with other populations, particularly the [illegible] population. The differences between groups can highlight their unique characteristics. But even beyond this, evidence must be derived from a diverse population to be generalizable. Factors such as geographic location, age, minority status and gender, for instance, are essential in assuring an acceptable level of generalizability. In addition, key persons who influenced the career aspirations of the disadvantaged were also considered part of the population. Here again, the sampling strategy accommodated this concern.

Validation evidence: To avoid the possibility of misinterpretation of data, it was essential to employ measures to ensure that conclusions were appropriate drawn. Corroborative measures were taken in the study to substantiate the basis for deriving conclusions. All these concerns were addressed in the subsections that follow.

Literature Review

Manual and computer searches were done to identify relevant sources of literature pertaining to the career aspirations or career development of the disadvantaged. Both searches revealed a variety of books,

articles and monographs that were directly or indirectly related to the phenomenon under study.

Recognizing that there may be fugitive materials that may not get into the formal data retrieval systems, letters were sent to professionals around the nation requesting information on literature that may enlighten the project staff in the conduct of their study. Letters were sent to guidance professionals in state departments, school districts and universities around the nation. Names were obtained from available mailing lists and from journals and other publications. This strategy proved to be quite productive since over 70% of those who were contacted responded via letter or telephone, and most of the respondents conveyed information that could be potentially of some use.

A format was designed for abstracting information from the literature. In addition to citation information, data were abstracted concerning (a) theoretical models that can foster an explanation of career aspirations, (b) factors and variables that can explain the career aspiration behavior of the disadvantaged, (c) alternative definitions of disadvantagement, (d) the unique career-related characteristics of specific disadvantaged populations, and (e) measures that have been taken to facilitate appropriate career decision making by the disadvantaged. This content was used as a basis for developing explanatory models, constructing data collection instruments and recommending measures that could more appropriate cater to the needs of disadvantaged clients who have the desire to enroll in vocational education programs.

Instrumentation

The literature review identified several theoretical constructs that could contribute to an understanding of the career aspirations of the disadvantaged. These constructs were noted, and a list was prepared enumerating specific theoretical items that could be used as the basis for developing questions in a survey instrument. These items were categorized according to sources of influence upon the individual; categories included personal factors; environmental factors--relatives; enviromental factors--peer gorup; social factors; psychological factors; and economic factors. Questions were developed to elicit information from the respondent on each theoretical item within each category. After several modifications of the questions and some experimentation with alternative formats, a first draft of the survey instrument was developed.

Project staff evaluated the questionnaire for flow, clarity of questions and concepts, and appropriateness of directions. The questionnaire was again modified and then subjected to pilot testing.

The questionnaire was pilot tested with students who are enrolled in vocational programs at the Tallahassee Community College and at the Lively Area Vocational Technical Center. These students represented "high" and "low" level programs (see definition in Appendix 1), different minority groups, different academic background, and different lengths of tenure in the vocational program. The project staff noted the problems experienced by these students, and recorded the concerns expressed as they responded to the questionnaire. This input was used to make yet another modification to the questionnaire. The final draft

of the questionnaire was administered to a group of students before actual data collection ensued. The final draft of the questionnaire is in Appendix 2.

The procedure for the administration of the questionnaire was prepared (Appendix 3), and the project staff became acquainted with the procedure before engaging in subsequent data collection efforts.

A questionnaire for parents was also developed to secure data from a subsample of the parents of student respondents. Factors and variables which could potentially explain the nature of parental influence on student's career aspirations were identified in the literature. These factors were used as a basis for developing questions. After pilot testing the instrument via telephone, modifications were made before the final draft was prepared.

Sample Selection

Although there was concern for geographical representation and for the representation of individuals possessing a vareity of characteristics, the sample was selected to represent program types and levels, and to represent institutions at which vocational education is offered in the State of Florida. Program types here refer to the Department of Education's System for the classification of vocational education programs; program levels refer to whether programs are considered high level or low level programs. Appendix 4 lists the universe of programs in AVTCs by program type and level. Appendix 5 lists the universe of programs for community colleges. The courses listed in these appendices represent the offerings of vocational programs in the State.

All community colleges and area vocational technical centers were invited to participate in the study. Programs were selected from these institutions to properly represent the variety of programs in the State. As a basis for sample selection, an institution by program matrix, was developed. The matrix noted program level and program type in addition to the institution(s) at which the program is offered.

The sample selection procedure was both purposive and random. Unique programs that were offered at only one institution in the State were automatically included in the sample. The remaining programs were randomly sampled such that each institution had high and low level programs represented. Among all institutions, programs were proportionately sampled according to the number of such programs in the State. Appendix 6 shows the sample selection frame used in the study. A total of 153 programs were sampled; and, with an average of 20 students in each program, the anticipated sample of students was about 3,060. It should be noted, however, that since the size of programs varied, the actual sample of respondents was 2,348. In addition to variance in the size of programs, other factors affected the size of the actual sample. These factors include scheduling conflicts, refusals by respondents, and absences from classes.

Since all of the institutions invited did not participate in the study, adjustments were made such that the same program representation could be applied to a smaller sample of institutions. The programs were divided among the 29 institutions that participated in the study. The list of participating institutions is in Appendix 7 and the list of sampled program in in Appendix 8.

In order to collect supplemental information from the home, a subsample of 201 parents were selected to secure data via a telephone survey. The sample was a proportional random sample by institutions. Program levels were represented such that 100 were selected from high level programs and 101 were selected from low level programs.

Data Collection

Project staff visited vocational institutions to collect the data. Before each site visit, arrangements were made with the representative at the institution to assemble all students who are enrolled in the sampled programs. Usually these students assembled in the school's cafeteria. Project staff then administered the questionnaire and remained in the vicinity to respond to questions that would further clarify the content of the questionnaire. The procedures for site visitation are in Appendix 3.

Two other data collection strategies were used. Namely, the selection of hold out sample, and the acquisition of information so that a sample of parents could be contacted. Ten (10) percent of the total number of students sampled in an institution were selected to be part of the hold out sample. The hold out sample was used for the purpose of validating the findings derived from the persons who responded to the questionnaire. To procure parental information, a small card was attached to the student questionnaire. The card was designed so that students could list the name, address, and telephone number of their parents, in addition to their own name, address and telephone number. When the questionnaires were collected, the cards were removed and filed separately. This measure helped to maintain

the confidentiality of the student's response. The student's name and address on the card served to inform the project staff about the location of students so that students with incomplete questionnaires could be contacted.

From the subsample of two hundred (201) parents, information was secured via telephone interviews.

Pre-Analysis

After the questionnaires were collected, the project staff conducted a visual edit of the data to ensure that responses were complete. The completed questionnaires were filed for coding and those that were incomplete were completed via telephone conversations with the respondents. The completed questionnaires were then coded and prepared for data analysis. Instructions for initial codes are noted in Appendix 9.

A code book was developed so that the following items could be coded: occupations, occupational prestige, vocational programs, relationships and open-ended responses. When the questionnaires were coded, information was keypunched onto a magnetic tape and the necessary materials were prepared so that the data could be analyzed via the Statistical Package for the Social Sciences.

Data Analysis

The analysis was basically descriptive. The analyses were done to highlight the differences between advantaged and disadvantaged groups on variables which were noted as items that can potentially influence the career aspiration of the disadvantaged. T-tests were performed

to denote the statistical significance of some of the more critical variables.

Evaluation/Validation

A selected number of individuals were contacted to assess the validity of the results. About 20 students were contacted to determine whether the barriers that were derived from the study are indeed barriers; and the results of this study were shared with five professionals in guidance and related fields to determine whether the results seemed plausible. This provided a basis for having confidence in intervention strategies using the findings of this study as a basis for action.

Attempts were also made to secure corroborating evidence from available documents to detect whether any written policies provided evidence of the existence of barriers.

Summary

These procedures addressed the concerns noted in the first part of this chapter. The following chapter examines the data that were secured.

CHAPTER 4

FINDINGS

The prime purpose of this study was to identify the barriers to high-paying occupations as perceived by disadvantaged students. The problem motivating the study was the preponderance of disadvantaged students who enrolled in "low level" programs in the State's Vocational Education Institutions. The stream of logic used in specifying the purpose of the study was that since low level programs lead to low-paying occupations, then students who opted for these programs were not on a pathway which lead to occupations with high level of renumeration. As such, circumstances which encouraged enrollment in low level programs were indeed barriers to high-paying occupations. But since students voluntarily select programs in which they will enroll, these barriers did not seem to lie solely in program selection policies, but more so in the career aspirations of those who participate in these programs and the variety of influences that shape an individual's career aspirations.

With this in view, the study sought to compare advantaged and disadvantaged students, on a variety of factors which are purported in the literature to affect career aspirations to the extent that the advantaged and disadvantaged students are different when compared on these factors, then the source of barriers could be identified. In

this case, as was pointed out in the previous chapter, barriers could be rooted in a compendium of psychological, social and economic factors which influence program choices. In presenting the results, these factors are addressed in four major sections: pre-enrollment, the enrollment decision, program participation and employment outlook. But before these are addressed, the distribution of disadvantaged groups in high and low level programs will be examined.

The Distribution of Disadvantaged Groups in High and Low Level Programs

Table 1 shows a breakdown of advantaged and disadvantaged groups by program level. The distribution of advantaged and disadvantaged in the sample raises serious questions about the preponderance of disadvantaged students in low level programs; or perhaps questions can be raised about the definitions of disadvantagement and the criteria for determining high and low level programs. Notwithstanding, Table 1 does not bear out any disproportionality--at least not significantly in the expected direction. There are slightly more minorities in low level programs; and more of the economically disadvantaged students participate in low level programs. But the distribution of the educationally disadvantaged and the advantaged is not as one expects. If one looks at the 168 students who fit into that group, the majority (60%) are enrolled in high level programs. Alternatively, the majority of the advantaged group (56%) is enrolled in low level programs. One would expect the opposite to be true.

Table 1

DISADVANTAGEMENT STATUS
COMPARED BY PROGRAM LEVELS

Disadvantagement Status	Program Level					
	High		Low		Total	
	#	%	#	%	#	%
Minority Status	307	48%	328	52%	635	100%
Economic Disadvantagement	81	45%	98	55%	179	100%
Educational Disadvantagement	101	60%	67	40%	168	100%
Non-disadvantagement	315	44%	398	56%	713	100%

There are advantaged and disadvantaged students in both high and low level programs. However, there are various levels of disadvantagement. Similarly, there are varying degrees at both high and low level programs. To detect differences, perhaps, criteria must be designed to detect the extreme in each of these cases. Only then could a clear line of demarcation be found. The results, however, should be interpreted within the context of the table. Because of the imprecision of definitions, some of the anticipated differences will be clouded. Results are presented in the four sections as noted before.

Pre-enrollment

This is the major source of potential barriers since it embodies the influences that the student brings to the enrollment decision. Everything that occurs in the student's life which may shape his/her view of how he/she relates to the world of work affect that decision to enroll. To the extent that there are differences between the advantaged and disadvantaged student with respect to these early influences, then the factors which impede proper decision making can be detected in their embryonic stages. Some of these factors addressed in this study are as follows:

1. parental influence;
2. prestige value of occupational environment;
3. nature of personal development - self concept, career maturity, motivation/drive, aspirational confidence level, parental support, self

evaluation skill, status improvement inclination, coping skills; and

4. sources of information for making educational choices.

The study's findings with respect to each of these will be addressed in turn.

Parental Influence

The aspirations of children are determined to a large extent by their home environment--primarily by the parental influence. The extent to which parents are able to postively influence the occupational goals of their children is limited to a large degree by their own occupational pre-disposition. In comparing advantaged and disadvantaged groups, it was found that both the prestige of parents' occupation and parents' level of education were significantly different between groups (Table 2). The average prestige of the occupations of parents of members of the advantaged group was 15.98, compared to 32.93 for the disadvantaged. Although there are differences in results when "current occupation" is compared with "last occupation," the conclusion can be drawn that there is a difference in the occupational prestige of jobs held by parents of advantaged students when compared with the disadvantaged.

Table 2 also shows that the parents of advantaged students generally have a higher level of education than the parents of the disadvantaged. When the number of years of schooling is compared, the parents of the advantaged students average 13 years while the parents of the disadvantaged average 11.20.

There were other slight differences, but as shown in Table 2, these were not statistically significant.

Table 2

A COMPARISON OF ADVANTAGED AND DISADVANTAGED STUDENTS ON VARIABLES RELATED TO PARENTAL INFLUENCE ON CAREER ASPIRATIONS

Variables Related to Parental Influence	Mean (Std.Dev.) Advantaged	Mean (Std.Dev.) Disadvantaged	T-Value	Significance
Parental assessment of child's early occupational aspirations.	16.26	20.80	.63	.530
Prestige of parents' current occupation.	37.94	35.67	-.25	.801
Parents' tenure in current occupation.	8.91	6.07	-1.07	.286
Prestige of parents' last occupation.	15.98	32.93	1.97	,051
Prestige of field of parents' formal training.	20.00	15.47	-.61	.543
Prestige of parents' preferred field of training.	16.36	18.07	.27	.787
Prestige difference--field of formal training and preferred training.				
Years of fulltime working experience--parents'.	23.05	26.47	.2	.361
Years of schooling completed.	13.00	11.20	-1.88	.063

Prestige Value of Occupational Environment

To the extent that occupations common to one's immediate environment affect one's pespective of the world of work, then the occupational contacts (real or imaginary) of students will have affected their occupational aspirations, and hence, there will be a consequent effect on their choice of a vocational program. Table 3 tries to compare the prestige of occupations in the environment of the advantaged and disadvantaged student, respectively. Will the result of some of the comparisons be questionable? There are significant differences in prestige that veer in the expected directions. For instance, the prestige of the current job of advantaged and disadvantaged students who were employed were significantly different. There were also notable differences of the following dimensions: first job held by respondent; typical jobs in the neighborhood; occupation of person admired. In all these cases, the advantaged students are generally exposed to jobs that are of a higher prestige value than those of their disadvantaged counterparts.

Generally, it can be concluded that the occupational aspiration of the disadvantaged students is impeded by the low prestige value of the occupations in their environment.

Nature of Personal Development

There are several personal characteristics which affect career aspirations and academic program selection. When various groups of advantaged and disadvantaged students were compared on these characteristics, several items of interest were noted.

Table 3

A COMPARISON OF THE PRESTIGE VALUE OF OCCUPATIONS IN THE ENVIRONMENT OF DISADVANTAGED AND NON-DISADVANTAGED STUDENTS

Occupation	Mean Prestige Value With Standard Dev.		T Value	Significance
	Advantaged	Dis-Advantaged		
Current job of respondent	26.25	15.44	-3.91	.000
First job held by respondent	56.06	50.27	-1.97	.049
Respondent next most recent job	.59	.48	-2.72	.007
Job desired after graduation	41.42	43.74	1.02	.308
Job aspiration in elementary school	37.39	33.95	-1.37	.170
Job aspiration in junior high school	.49	.43	1.21	.227
Job aspiration in senior high school	.56	.47	-1.95	.051
Typical jobs in neighborhood	28.44	23.76	-1.96	.050
Typical jobs in neighborhood	.68	.63	-1.22	.224
Typical jobs in neighborhood	.64	.59	-1.00	.319
Father's occupation	30.21	30.91	.25	.805
Mother's occupation	. .56	.37	-4.51	.000
Occupation of sibling (brother)	. .54	.44	-2.25	.025
Occupation of persons admired 1	.40	. .29	-2.73	.006
Occupation of persons admired 2	25.19	23.18	- .85	.396
Occupation of persons admired 3	22.11	18.22	-1.66	.096
Occupation of mentor	11.10	14.62	1.80	.072

On the self concept dimension in Table 4, the disadvantaged group generally exhibited a lower self concept than the advantaged; but these differences were even more pronounced when the advantaged who are enrolled in high level programs were compared with disadvantaged who were enrolled in low level programs. On the first item, for instance, the advantaged in low level programs had a mean of 6.1 when compared to the mean of the disadvantaged in high level programs with a mean of 5.2. It does seem that the disadvantaged students who are enrolled in low level programs exhibit a slightly lower confidence level than their disadvantaged counterparts, and a significantly lower level of confidence than the advantaged students, especially those who are enrolled in presumably less challenging programs.

Career maturity is another area of personal development that affects career aspiration and program choice. Students who are more mature select programs and aspire to occupations that are consistent with their level of intellectual development and their personal characteristics (e.g., personality). All respondents were asked a series of questions related to career maturity. The mean of the responses of various groups are shown in Table 4. Here, again, the advantaged students have means that are consistently higher than those that are disadvantaged; indicating, therefore, that the advantaged students have a higher level of career maturity than the disadvantaged and, as a result, will demonstrate more planful program selection and more realistic career aspirations.

Again in this dimension, the advantaged group who were enrolled in low level programs exhibited the highest level of career maturity.

Table 4

COMPARISON OF THE MEAN SELF-RATING OF ADVANTAGED AND NONDISADVANTAGED AT DIFFERENT PROGRAM LEVELS IN DIMENSIONS RELATED TO CAREER ASPIRATIONS AND ACADEMIC PROGRAM SELECTION.

Theoretical Dimension	Response Item	MEAN SELF-RATING: DISADVANTAGED GROUPS BY PROGRAM LEVELS. Disadvantaged General	Disadvantaged in High Level Programs	Disadvantaged in Low Level Programs	Nondisadvantaged General	Nondisadvantaged in Low Level Programs
Self-concept; Self-perception	I am a competent person.	5.3	5.2	5.6	5.9	6.1
	I am a likable person.	5.4	5.5	5.5	5.8	6.0
	I do not have the ability to enter most other vocational programs.	3.1	2.6	2.3	2.1	2.0
	I will be lucky to complete this program.	3.1	2.6	2.1	2.1	2.1
	I feel lucky to be accepted in this program.	4.5	4.0	3.8	3.9	3.9
	I can enroll in any vocational program I desire.	4.7	4.4	5.2	5.4	5.8
Career Maturity	Knowledge of my abilities is important in making career decisions.	5.6	5.5	5.7	6.1	6.2
	I try to choose jobs that fit my personality.	5.0	4.9	5.0	5.5	5.5
	I must know what a job requires before choosing.	5.4	5.2	5.5	5.7	5.8
	I always seek information to make educational and occupational decisions.	5.0	4.9	5.1	5.3	5.5

Table 4 (continued)

Theoretical Dimension	Response Item	MEAN SELF-RATING: DISADVANTAGED GROUPS BY PROGRAM LEVELS. Disadvantaged General	Disadvantaged in High Level Programs	Disadvantaged in Low Level Programs	Nondisadvantaged General	Nondisadvantaged in Low Level Programs
Motivation/ Drive	I will do anything to succeed in my program.	4.4	4.6	4.4	4.9	5.0
	Getting a job in my program area is one of the most important things to me.	5.4	5.0	5.3	5.4	5.6
	I will expend all the effort necessary to get the occupation of my choice.	5.5	5.3	5.6	5.9	6.1
	I am willing to make sacrifices to obtain the job I desire.	5.2	4.7	5.2	5.4	5.6
Aspirational Confidence Level	I know I will fail this program.	1.9	1.6	1.4	1.4	1.3
	This is the only program I could have entered.	2.3	2.1	1.8	1.9	1.8
	Opportunities for success are difficult to come by.	3.8	3.4	3.2	3.1	3.0
	I try to avoid situations where I may experience failure.	4.1	4.9	3.4	3.6	3.5
	I seek out situations in which I know I can be successful.	4.9	4.6	4.5	4.8	5.0

Table 4 (continued)

Theoretical Dimension	Response Item	MEAN SELF-RATING: DISADVANTAGED GROUPS BY PROGRAM LEVELS. Disadvantaged General	Disadvantaged in High Level Programs	Disadvantaged in Low Level Programs	Nondisadvantaged General	Nondisadvantaged in Low Level Programs
Parental Support	I get along well with my parents.	5.0	4.8	5.2	5.7	5.8
Self-evaluation/ academic	I think I am successful in school.	4.9	5.1	5.3	5.8	6.1
Status improvement inclination	This program is my ticket to a better life.	5.2	4.9	4.9	5.1	5.3
	When I graduate from this program, I will have a higher social status.	4.6	4.0	4.1	4.3	4.4
Evaluation of program relevance	What I learn in the program in which I am presently enrolled will help me to do my job when I become employed.	5.8	5.6	5.8	6.1	6.3
Self-evaluation--coping skills	I am capable of coping with most problems that may arise.	5.4	5.4	5.7	6.0	6.2

However, the disadvantaged students in high level programs exhibited the lowest level of career maturity. More information is needed to truly understand the relationship between advantagement, program enrollment (high/low level) and career maturity. Although the findings are significant, the relationship is still unclear. Although individuals with a high level of career maturity are dispersed across programs, the disadvantaged in all programs seem to possess lower career maturity levels.

On the dimension "motivation/drive," the same general trend is also evident. Generally, the disadvantaged have a lower level of motivation than their advantaged counterparts, with the advantaged in low level programs having the highest motivation levels and the disadvantaged in the high level programs having the lowest levels of motivation. There is definitely a "program-effect" which relates to the degree of challenge in the program and the level of personal development of the enrollee. The challenge of the high level program, when combined with the career development deficits that are attendant to disadvantagement, consistently place the disadvantaged student at the lower end of the scale on these theoretical dimensions. The opposite is true for the advantaged student in high level programs.

Another dimension examined was entitled "aspirational confidence level." This dimension assesses the positivity of the student's outlook with respect to educational and career opportunities. Both advantaged and disadvantaged students at all levels generally thought that they will be successful in the programs in which they were enrolled; and they both thought that they could have entered other programs if they

desired. But apart from these, two differences emerged. The disadvantaged were more inclined to avoid situations in which they could experience failure; and they were also more inclined to believe that opportunities for sucess are difficult to come by. These preceptions can have a debilitating effect on educational and occupational success.

As demonstrated in Table 4, there were other areas in which differences were obvious. The advantaged students generally had better relationships with their parents; they generally thought of themselves as successful in school to a greater degree than the disadvantaged; and they evaluated themselves as having a higher level of coping skills than the self evaluation of the disadvantaged group. Again, all these differences were more pronounced when the advantaged in low level programs were compared to the disadvantaged in high level programs.

The nature of personal development affect career aspirations and academic program selection. This was borne out by the findings detailed in Table 4. The factors that act as barriers are those integral to the personal development of the student. When the students opt for a vocational program and place themselves within a career stream, many of the barriers have already been set in place by the social and psychological influences which forge personal identity.

Sources of Information for Making Educational Choices

If students are to select programs which commensurate with their abilities and aspirations, then the source from which they seek educational counseling is critical. The scope of information that is available from that source will affect the wisdom of the student's choice.

If advantaged and disadvantaged students are compared, to the extent that the disadvantaged students seek information to a disproportionate degree from less informative sources of advice, then that group will be at a disadvantage in making career choices.

In Table 5, both groups were compared on the sources from which they seek educational information. If students responded that they did not know, or if they depended on friends or parents for information, then they were categorized as not exploring informative sources of advice. The groups were asessed to determine the extent to which they differentially utilized sources of educational information. The results in Table 5 do not point to any significant difference.

A slightly higher percentage of disadvantaged students (13%) responded that "they did not know" than advantaged students (11%); and the advantaged students seem to have a greater dependence on their parents for information (11.2%) than the disadvantaged (6.5%). Apart from these differences, the sources of information which both groups utilize seem to be similar. From this data, the availability of information does not seem to be a barrier to the selection of appropriate programs and occupations among the disadvantaged.

The results related to pre-enrollment influences seem to indicate that some barriers are inherent in disadvantagement. This, I believe, is consistent with the literature reviewed. There are social and psychological influences which dictate the career path selected by students. Disadvantaged students, however, are exposed to influences which direct them to careers that are on the lower rungs of the career ladder. The influence of their history places the proverbial yoke

Table 5

COMPARISON OF IDENTIFIED SOURCES
OF INFORMATION FOR PURSUING CONTINUING EDUCATION
(ADVANTAGED/DISADVANTAGED)[1]

Sources of Educational Information	Advantaged #	Advantaged %	Disadvantaged #	Disadvantaged %
Don't know	79	11.0	22	13.0
Guidance Office	348	48.5	87	51.5
State Department of Education	143	19.9	182	25.4
Friends	89	12.4	80	11.2
Parents	80	11.2	47	6.5
Teachers	241	33.6	57	33.7
State Agencies	50	7.0	9	5.3
Self-initiated	8	1.1	1	.6
Newspapers/magazines/etc.	4	.6	0	0.0
Employer	6	.8	0	0.0

[1]Description of specific open-ended responses coded from the "other" category appears in Appendix 10.

around the necks of the disadvantaged. If left unattended, the yoke becomes a burden to be borne through life continually improving negative influences on the career through educational and occupational choices.

The Enrollment Decision

Another way of examining barriers to participation in high level programs--and, hence, barriers to high-paying occupations--is to study the enrollment decision. If students enter programs for the wrong reasons (e.g., they had friends in the program) or if they entered a program because they could not gain access to another program, then different kids of barriers may exist. In the first case it may be a personal development barrier--career maturity--and in the latter case it may be an institutional barrier. Regardless of their label, they both contribute to the same outcome.

Table 6 compares the reasons why advantaged and disadvantaged students enroll in vocational programs. Except for three reasons, both advantaged and disadvantaged groups expressed similar reasons for enrollment (i.e., there did not appear to be significant differences between the groups except for three reasons).

The disadvantaged group had a greater desire to enroll in what can be referred to as an "easy" program. When the groups were compared, 10% of the disadvantaged as compared to 4.7% of the advantaged expressed this as a reason for program choice. This can be accounted for by the career maturity deficit among disadvantaged clients. But there were differences on barriers which could be labelled as institutional barriers.

Table 6

A COMPARISON OF THE REASONS WHY ADVANTAGED AND DISADVANTAGED STUDENTS ENROLL IN VOCATIONAL PROGRAMS[1]

Reasons	Advantaged #	Advantaged %	Disadvantaged #	Disadvantaged %
Had always hoped to enter such a program.	272	37.9	62	36.7
Had friends enrolled in the program	91	12.7	15	8.9
Heard many good things about the program	291	40.6	58	34.3
High salary potential after completion of program.	317	44.2	86	50.9
Convenient hours of work	105	14.6	32	18.9
Program offered at convenient time	159	22.2	35	20.7
Program appeared to be an easy program	34	4.7	17	10.1
Program presented a challenge	300	41.8	67	39.6
Program length was attractive	127	17.7	26	15.4
Financial assistance was available	35	4.9	55	32.5
Parental encouragement	132	18.4	21	12.4
Friends' encouragement	112	15.6	29	17.2
Counselor's/teachers' encouragement	74	10.3	30	17.8
Leads to prestigious occupations	233	32.5	47	27.8
To get respect from others	53	7.4	15	8.9
Program was not costly	174	24.3	31	18.3
To become an important person	60	8.4	20	11.8
Need for retraining/upgrading	33	4.6	4	2.4
Preferred program had no vacancies/was unavailable	10	1.4	6	3.6
Personal growth	2	.3	1	.6
Hobby/personal project/personal interest	26	3.6	7	4.1
Training required	13	1.8	0	0.0
Dissatisfaction with previous program/work, etc.	15	2.1	0	0.0

[1]Description of specific open-ended responses coded from the "other" category appears in Appendix 11.

More of the disadvantaged indicated financial assistance as the reason for enrollment (32.5%) than did the advantaged group (4.9%); and more of the disadvantaged group indicated that they could not gain entry to their preferred program (3.6%) than their advantaged counterparts (1.4%). The availability of financial assistance as a reason for entering a vocational program may be a significant barrier. Since in some institutions students may not be eligible for financial assistance to enter certain programs if they do not receive adequate scores on required entry exams. Many disadvantaged students do not perform well in these exams and, hence, they are denied financial assistance and, hence, entry to the program. But even further, this large difference may infer that the unavailability of financial assistance could deter a large percentage of the disadvantaged from participating in vocational programs.

Table 6, as noted before, indicated that their preferred program was not available to a larger percentage of disadvantaged students. If one looks at the percentage of students who considered another program but did not enroll (Table 7), then another significant difference seems to emerge to substantiate the findings in Table 6. In Table 7, a larger percentage of the disadvantaged group (28%) considered another program in which they could not enroll than did their disadvantaged counterparts (15%).

Table 8 notes the reasons that were given for not enrolling in a preferred program. The reasons that were expressed by a larger percentage of the disadvantaged which accounted for their non-enrollment in a preferred program are quite revealing. A higher percentage of

Table 7

A COMPARISON OF ADVANTAGED/DISADVANTAGED
ON DESIRE TO HAVE ENROLLED IN ANOTHER VOCATIONAL PROGRAM

Did you consider another program but did not enroll?	Advantaged		Dis-Advantaged		Total	
Yes	203	72%	78	28%	281	100%
No	502	85%	87	15%	589	100%

BEST COPY AVAILABLE

Table 8

A COMPARISON OF ADVANTAGED/DISADVANTAGED STUDENTS AND REASONS WHY THEY DID NOT ENROLL IN OTHER PROGRAMS THEY CONSIDERED[1]

Reasons for Non-Enrollment	Advantaged #	Advantaged %	Disadvantaged #	Disadvantaged %
Program was too expensive	26	3.6	7	4.1
I did not have the ability	27	3.8	13	7.7
Program was too long	16	2.2	8	4.7
Program was too short	1	.1	0	0.0
Had no friends in programs	10	1.4	3	1.8
Program required too much work	12	1.7	8	4.7
Heard bad things about programs	10	1.4	3	1.8
Salary after graduation not attractive	31	4.3	8	4.7
Lack of transportation	5	.7	5	3.0
Could not meet entrance requirements: Low test score	15	2.1	14	8.3
Other: Please specify	15	2.1	11	6.5
Blank	2	.3	0	0.0
Dissatisfaction with program	4	.6	1	.6
Barriers to program entry	27	3.8	17	10.1
Program not challenging	10	1.4	3	1.8
Lacked interest in program	10	1.4	1	.6
Preferred current program	20	2.8	6	3.6
Lack of self confidence	0	0.0	1	.6
Advised to choose alternative	5	.7	2	1.2
Lacked knowledge for choosing/Undecided	8	1.1	1	.6

[1]Description of specific open-ended responses coded from the "other category appearing in Appendix 12.

disadvantaged clientele indicated the following reasons: program was too expensive; they did not have the ability; program was too long; program required too much work; they could not meet the entrance requirements because scores were too low; and, there were barriers to program entry. The barriers evident in these reasons are clear: the lack of motivation among disadvantaged clientele; and institutional mechanisms such as tests, limited space in programs, and the availability of financial assistance.

Another difference with respect to program enrollment is shown in Table 10. When advantaged and disadvantaged students were compared on "Scope of Choice," the disadvantaged student group seems to have seriously considered significantly more programs than those that were advantaged. However, when the disadvantaged group which was enrolled in low level programs was compared with the disadvantaged group in high level programs, there was not a significant difference in the "Scope of Choice" (Table 11). But when this same group (the disadvantaged in low level programs) was compared with the advantaged in low level programs, again, a significant difference emerged (Table 12). Generally, disadvantaged clients examine or seriously consider more programs than their advantaged counterparts. This may be explained by differences in levels of career maturity. If the advantaged student exhibits a higher level of career maturity, then there will be greater certainty in the selection of a vocational program. Hence, the advantaged student will consider fewer programs in making a decision to participate in vocational education.

On the other hand, the disadvantaged student who is less certain about career pursuits will explore a greater variety and a larger number of programs before the decision to enter a program is made. This is evident in the findings as detailed in Tables 10 to 12.

Program Participation

Once students have enrolled and have entered a program, most of the pre-enrollment influences have already had a major effect, and the student has entered a pathway that restricts occupational choice. One can readily conclude that at this point the damage has been done. But there may be the potential for even more damage to occur in the nature of the students' exposure to the vocational program. If students participate in programs "half-heartedly" for any of a variety of reasons, or if their performances are not up to some desired standard (one of the results of the former) then the probability of success will be decreased and occupational choices will be even more restricted. This study attempted to determine the extent to which there were influences which may potentially cause disadvantaged students to exhibit attitudes that are inimical to success in vocational programs. To the extent that these influences were more intense among the disadvantaged, then these influences could be barriers in themselves or they could be the source of barriers. Related information is presented in Tables 9 through 12.

An attempt was made to evaluate students' satisfaction with their program as a variety of dimensions. For instance, students were asked, "If given another opportunity, would they choose another program."

Table 9

A COMPARISON OF ADVANTAGED/DISADVANTAGED STUDENT SATISFACTION IN THEIR CURRENT PROGRAM

If given another opportunity, would you choose another program?	Advantaged		Dis-Advantaged		Total	
	#	%	#	%	#	%
Yes	209	72%	83	28%	292	100%
No	493	86%	83	14%	576	100%

Table 10

COMPARISON OF DISADVANTAGED AND ADVANTAGED STUDENTS
ON KEY EXPLANATORY DIMENSIONS

DIMENSIONS	ITEMS	Dis-Advantaged	Advan-taged	T-Value	Significance
Perceived Program Difficulty	How difficult is your present program?	2.96	3.27	-3.30	.001
Degree of Challenge	Are you pleased with the difficulty level of your program?	3.73	3.87	-1.27	.203
Interest in Program	How will you rate your interest in the program?	4.29	4.47	-2.01	.044
Self-perception of Program Prestige	Do you feel that this is a prestigious program?	3.51	3.97	-4.21	.000
Peer Support	Do your friends place a high value on this program?	3.43	3.68	-2.23	.026
Parental Support	Do your parents place a high value on this program?	3.47	3.65	-1.22	.222
Program Satisfaction	Would you recommend this program to your friends?	4.09	4.26	-1.62	.106
Self-assessment of Academic Performance	How well are you doing in the program in which you are presently enrolled?	3.72	4.24	-6.26	.000
Scope of Choice	About how many other programs did you look at before entering your present program?	2.86	2.13	1.65	.100
Scope of Choice	How many programs did you seriously consider?	2.15	1.29	2.83	.005

To the extent that students are inclined to choose another program, then it can be inferred that they are not satisfied with the program in which they were currently enrolled. As shown in Table 9, 28% of the disadvantaged as compared with 14% of the advantaged had preference for another program. More of the disadvantaged students were dissatisfied with the programs in which they were currently enrolled. The basis of the dissatisfaction is evident in Tables 10, 11, and 12.

Disadvantaged students had a significantly lower interest in the programs in which they were currently enrolled; they generally perceived their programs to be less prestigious than did the advantaged group, and the extent to which they felt that their friends placed a high value on the program was significantly lower than tha[illegible]he advantaged group. In addition, they were not as satisfied since they were less inclined to recommend their program to their friends; and they assessed themselves to be doing less well academically than the advantaged group. All these are evident in Table 10.

When the disadvantaged in the high and low level programs were compared (Table 11) the disadvantaged enrolled in high level programs generally perceived their programs to be more difficult, less prestigious, and of less value to their friends and parents. Generally, the disadvantaged in the high level programs were less satisfied with their programs than those who were enrolled in low level programs. This raises the suspicion that the disadvantaged in high level programs were misplaced, alienated or denied essential academic or psychological supportive services.

Table 11

COMPARISON OF DISADVANTAGED AND ADVANTAGED STUDENTS
IN HIGH AND LOW LEVEL PROGRAMS ACCORDING TO KEY EXPLANATORY DIMENSIONS

DIMENSIONS	ITEMS	Hi-Level Dis-Advantaged	Low-Level Dis-Advantaged	T-Value	Significance
Perceived Program Difficulty	How difficult is your present program?	2.90	3.33	-6.49	.000
Degree of Challenge	Are you pleased with the difficulty level of your program?	3.75	3.78	- .42	.674
Interest in Program	How will you rate your interest in the program?	4.36	4.42	- .95	.343
Self-Perception of Program Prestige	Do you feel that this is a prestigious program?	3.58	3.82	-3.11	.002
Peer Support	Do your friends place a high value on this program?	3.41	3.67	-3.29	.001
Parental Support	Do your parents place a high value on this program?	3.42	3.68	-2.46	.014
Program Satisfaction	Would you recommend this program to your friends?	.24	4.10	2.00	.046
Self-assessment of Academic Performance	How well are you doing in the program in which you are presently enrolled?	3.99	4.03	- .57	.566
Scope of Choice	About how many other programs did you look at before entering your present program?	2.53	2.76	- .73	.465
Scope of Choice	How many programs did you seriously consider?	1.64	1.67	- .15	.884

However, when the advantaged and disadvantaged in the low level programs were compared, a different pattern emerged. The low level advantaged group showed a significantly more healthy level of program acceptance (Table 12). They had a higher perception of program difficulty; they were more pleased with the difficulty level; they had a higher interest in their programs; they felt to a greater degree that the program was prestigious, and that their friends and parents placed a high value in the program; and they generally assessed themselves to be performing better in their programs than did their disadvantaged counterparts.

The differences revealed in Tables 10 to 12 again point to differences in career maturity between the advantaged and disadvantaged students. The advantaged students may feel more assured in their program choice, and as a result, represent a higher level of satisfaction and acceptance of their programs. The disadvantaged, on the other hand, may have opted for their programs for the wrong reasons, or may have career aspirations that are not consistent with their program choice. The result is a general level of dissatisfaction, which creates an attitude that is a significant barrier to occupational success.

Employment Outlook

Another area in which barriers may be evident is the occupational/employment outlook of disadvantaged students. The extent to which they had realistic plans, and a realistic outlook on the world of work, or the extent to which they were mature in their decision making and

Table 12

COMPARISON OF DISADVANTAGED AND ADVANTAGED
IN LOW LEVEL PROGRAMS ON KEY EXPLANATORY DIMENSIONS

DIMENSIONS	ITEMS	Low-Level Dis-Advantaged	Low-Level Non-Dis-Advantaged	T-Value	Significance
Perceived Program Difficulty	How difficult is your present program?	3.33	3.45	-1.72	.086
Degree of Challenge	Are you pleased with the difficulty level of your program?	3.78	3.94	-2.09	.037
Interest in Program	How will you rate your interest in the program?	4.42	4.53	-1.86	.063
Self-perception of Program Prestige	Do you feel that this is a prestigious program?	3.82	4.09	-3.41	.001
Peer Support	Do your friends place a high value on this program?	3.67	3.85	-2.18	.030
Parental Support	Do your parents place a high value on this program?	3.67	3.90	-2.08	.038
Program Satisfaction	Would you recommend this program to your friends?	4.10	4.24	-1.95	.05
Self-assessment of Academic Performance	How well are you doing in the program in which you are presently enrolled?	4.03	4.27	-3.68	.000
Scope of Choice	About how many other programs did you look at before entering your present program?	2.76	2.25	1.43	.154
Scope of Choice	How many programs did you seriously consider?	1.67	1.26	1.70	.090

hopeful about employment opportunities will comment on existence or non-existence of barriers related employment.

Table 13 reveals that, generally, advantaged and disadvantaged students have similar post graduation plans, except that a slightly higher percentage of the disadvantaged group (8.3% compared to 7.0%) planned to take a break from school and work after graduation.

Tables 14 and 15 assessed the students' perception of the desired characteristics of an occupation and their perception of the characteristics they desired in a job. As evident in Table 14 there were very slight differences among advantaged and disadvantaged groups in the perception of characteristics desired in a job. The disadvantaged seem to place a higher value on dealing with people, while the advantaged group placed generally higher values on data manipulation, managing stress, solving problems, assertiveness, manual dexterity and ability to remain on task with distractions.

Table 15, however, revealed differences that were more significant. While the advantaged group placed a significantly higher value on pride in work, good working conditions and monetary benefits, the disadvantaged group place high values on activity, opportunity to gain respect and social status. This may be indicative of an inclination among the disadvantaged to remedy social deficits in their occupational choice.

When advantaged and disadvantaged groups were compared on sources of information (Tables 16 and 17) slight differences were obvious. For instance, advantaged students depended on their parents to a greater extent as a source of advice on occupational plans (Table 16), and

Table 13

A COMPARISON OF THE POSTGRADUATION PLANS OF ADVANTAGED AND DISADVANTAGED STUDENTS.[1]

Postgraduation Plans	Advantaged		Disadvantaged	
	#	%	#	%
Seek employment/already working.	470	65.6	110	65.1
Pursue further education.	184	25.7	47	27.8
Take a break from school and work.	50	7.0	14	8.3
Work while pursuing further education.	34	4.7	10	5.9
Uncertain.	6	.8	0	0
Already retired/retire.	2	.3	0	0
Engage in personal project.	6	.8	0	0

[1] Description of specific open-ended responses coded from the "other" category appears in Appendix 13.

Table 14

COMPARISON OF DISADVANTAGED AND NONDISADVANTAGED STUDENT IDENTIFICATION OF THE CHARACTERISTICS NECESSARY TO BE SUCCESSFUL IN AN OCCUPATION [1]

Characteristics of Success	Advantaged #	Advantaged %	Disadvantaged #	Disadvantaged %
Ability to deal with people	570	79.5%	137	81.1%
Ability to manipulate data	314	43.8%	55	32.5%
Ability to manage stress	469	65.4%	95	56.2%
Ability to solve problems	542	75.6%	108	63.9%
Assertiveness (Ability to state opinions openly)	324	45.2%	54	32.0%
Manual dexterity (Ability to use you hands)	463	64.6%	87	51.5%
Ability to remain on task with distractions in environment	441	61.5%	82	48.5%
Technical knowledge/Intelligence	41	5.6%	6	3.6%
Creativity	--	.1%	0	0.0%
Ability to concentrate/persistence	3	.4%	0	0.0%
Self-initiative	--	.1%	0.	0.0%
Experience	0	0.0%	0	0.0%
Committment	2	.3%	0	0.0%
Self-confidence	0	0.0%	--	.1%
Personal Integrity	2	.3%	0	0.0%
Keeping abreast of knowledge	0	0.0%	0	0.0%
Patience	--	.1%	0	0.0%
Ability to work alone	--	.1%	0	0.0%
Organizing skills	2	.3%	0	0.0%
Communication skills	3	.4%	0	0.0%
Leadership traits	2	.3%	0	0.0%
Physical endurance	2	.3%	0	0.0%
Ability to follow instructions	2	.3%	0	0.0%

[1] Description of specific open-ended responses coded from the "other category appears in Appendix 14.

Table 15

COMPARISON OF DISADVANTAGED AND NONDISADVANTAGED STUDENT IDENTIFICATION OF THE CHARACTERISTICS THAT THEY DESIRE IN AN OCCUPATION

Characteristics Desired	Advantaged #	Advantaged %	Disadvantaged #	Disadvantaged %
Activity	218	30.4%	60	35.5%
Involvement	247	34.4%	59	34.9%
Pride in work	428	59.7%	86	50.9%
Need for responsibility	168	23.4%	37	21.9%
Opportunity to provide service	175	24.4%	41	24.3%
Prestige	94	13.1%	19	11.2%
Opportunity to gain respect	98	13.7%	36	21.3%
Good working conditions	237	33.1%	51	30.2%
Monetary benefits	283	39.5%	42	24.9%
Social status	71	9.9%	20	11.8%

Table 16

A COMPARISON OF ADVANTAGED AND DISADVANTAGED ON SOURCE OF ADVICE FOR OCCUPATIONAL PLANS[1]

SOURCE OF ADVICE	ADVANTAGED		DISADVANTAGED	
	#	%	#	%
Parents	305	42.5	51	30.2
Teachers	182	25.4	45	26.6
Counselors	200	27.9	48	28.4
Friends	188	26.2	44	26.0
Other sources	30	4.2	12	7.1
No advice received	167	23.3	35	20.7
Immediate family	26	3.6	10	5.9
Extended family	4	.6	1	.6
Employer	4	.6	3	1.8

[1] Description of specific open-ended responses coded from the "other" category appears in Appendix 15.

Table 17

COMPARISON OF IDENTIFIED SOURCES
OF JOB INFORMATION TO UTILIZE IN JOB SEARCH
(ADVANTAGED/DISADVANTAGED)[1]

Sources of Job Information	Advantaged		Disadvantaged	
	#	%	#	%
Don't know	57	7.9	17	10.1
Guidance Office	16	23.0	43	25.4
State Employment Office	238	33.2	374	52.1
Newspapers	342	47.7	365	50.9
Friends	162	22.6	30	17.8
Parents/Relatives	69	9.6	2	1.2
Teachers	139	19.4	29	17.2
Self-initiated	44	6.1	8	4.7
Already employed	6	.8	0	0.0
Company's Personnel Office/Union	10	1.4	1	.6
Private Employment Agency	2	.3	0	0.0

[1]Description of specific open-ended responses coded from the "other" category appears in Appendix 16.

for job search information, a higher percentage of the disadvantaged indicated that they had no knowledge of sources. The disadvantaged were more inclined to seek job search information from the State Employment Service, the newspapers, and to a lesser degree, the guidance office, while the advantaged were more inclined to seek this information from less formal sources like friends, relatives and teachers. While the disadvantaged must depend on traditional sources, the advantaged can rely on the less formal (and usually more dependable and effective) sources of information (Table 17).

Table 18 notes the problems both groups anticipate in the job market after graduation. Generally, the same pattern of expectation exists for the advantaged and disadvantaged, except a greater percentage of the disadvantaged anticipated discrimination in the job market after graduation. Most of them anticipated discrimination with respect to race. A higher percentage of the disadvantaged also anticipated problems, getting to the place of employment and were concerned that they lacked the desired level of training.

The employment outlook of disadvantaged students is effected by their social and psychological history. The effect of early influences taints their perception of occupational requirements, and they are generally not privileged enough to have access to dependable and effective sources of information, i.e., the informal network of information. These constitute barriers to effective participation in the world of work.

Table 18

COMPARISON OF ANTICIPATED JOB MARKET PROBLEMS AFTER GRADUATION (ADVANTAGED/DISADVANTAGED)[1]

ANTICIPATED PROBLEMS	Advantaged #	Advantaged %	Disadvantaged #	Disadvantaged %
Discrimination	72	10.0%	22	13.0
Availability of jobs	299	41.7	63	37.3
Too few jobs relating to training	71	9.9	20	11.8
Low income	81	11.3	21	12.4
Not enough experience	284	39.6	62	36.7
Too many persons seeking jobs in the area	189	26.4	41	24.3
Place of employment not easy to get to	84	11.7	23	13.6
Not enough training	81	11.3	30	17.8
Discrimination--Physical appearance (weight)	20	2.8	5	3.0
Discrimination--Race	30	4.2	24	14.2
Discrimination--Sex	26	3.6	12	7.1
Discrimination--National Origin	29	4.0	8	4.7
Discrimination--Age	52	7.3	15	8.9
Working conditions unacceptable	4	.6	0	0.0
Resources for own business	4	.6	0	0.0
Physical limitations	2	.3	2	1.2
Unacceptable to others	.7	.1	0	0.0

[1]Description of specific open-ended responses coded from the "other" category appearing in Appendix 17.

Content Analysis

In addition to information acquired through the survey of respondents, documents were reviewed to abstract procedures that could in fact present barriers to disadvantaged students. The type and nature of these barriers are presented in Table 19. There were economic barriers (e.g., unavailability of financial aid); barriers related to screening procedures (e.g., the administration of diagnostic tests); and barriers in the form of program inaccessibility (e.g., filled classes).

Some of the most striking barriers in this regard were the screening through diagnostic, interest and aptitude tests; programs not meeting the financial capacity of disadvantaged students; and brochures and other recruitment materials which discouraged the disadvantaged from participation in selected programs. In the case of the latter, project staff reviewed brochures which used photographs of minority candidates on brochures for low level programs and excluded these photographs for the higher level programs. Also evident in some of the brochures were language barriers. Disadvantaged candidates could be easily turned off either because of the level of reading difficulty, the formality or because of the inadequacy with which these brochures addressed the questions/concerns that would naturally come from disadvantaged and hesitant clients.

Therefore, in addition to the more fundamental barriers related to personal development (e.g., career maturity) there are barriers which are imposed by institutional policies related to the delivery of vocational programs.

Table 19

BARRIERS TO ADEQUATE
PROGRAM SELECTION AS DERIVED
FROM ANALYSIS OF DOCUMENTS

Types of Barriers	Nature of Barriers
Economic/Financial	• Financial aid is available only for selected program choices. • Some programs that are desired are too long given the urgency of students need for employment. • Unavailability of financial aid for some students who are in need. Students do not qualify for certain types of financial aid. • For some programs classes during the day are too long to afford students time to engage in part time employment. • Tuition and course fees for some programs are beyond the financial capacity of some disadvantaged students. • Related to the above (course fees) cost of books, uniforms and supplies.
Screening procedures	• Interest and aptitude tests are administered for placing students into programs (TABA, GATB) • In some institutions pre entrance examinations are used. • Content of recruitment materials that may turn off disadvantaged clients. • Use of interest surveys. • Diagnostic test used selecting applicants.

Table 19 (continued)

Type of Barriers	Nature of Barriers
Access	• Unavailability of programs of interest. • Time at which the program is offered. • Filled classes/No openings during enrollment. • Requirements for entry into the program is too high.

Summary

As can be ascertained from these findings, the disadvantaged clients who are enrolled in vocational programs are faced with hurdles which hinder their entry into high-paying occupations. The most significant of these hurdles are those which shape the individuals' perception of self and their perception of the world of work. Unfortunately, these hurdles are brought to life long before the students enter a vocational program. While some effort can be made in vocational institutions to arrest the problem, most of the inroads must be made in the extended period preceding enrollment in a vocational program--the period between birth and graduation from high school. Conclusions and recommendations are presented in the chapter which follows.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Disadvantaged students, for the most part, have come from environments where the social and economic circumstances have imposed deficits in their development, and these deficits have negative effects on their occupational choices. When the advantaged and disadvantaged groups were compared, differences were consistently found in areas that could enlighten and inform students in their academic and occupational choices. The advantaged students seem to have a better facility for making these choices.

These deficits are the true barriers to high-paying occupations since they lead to the selection of lower level programs and, as a result, place students on the pathway to low-paying jobs. The following conclusions can be derived from the study:

1. The negative effects of disadvantagement are rooted in the experiences of students before they pursue vocational programs. The most significant barriers to these students are those imposed by the economic, social and psychological influences that shape their occupational desires. While educational deficits do constitute a significant barrier, the influence of their socio-economic environment on the values

and self perception of the disadvantaged play a significant role in their choices of educational programs and occupational pursuits.

2. The negative effects of disadvantagement are reinforced by the educational system. By and large, students are not counseled into courses. They do not have the desired mobility to move from a low level program to the high level program of their desire. They are screened into programs through diagnostic testing, and once they have enrolled in these programs, they are essentially locked in until graduation. They are locked in, sometimes because of their own desire not to waste time and resources, and other times, because of the unavailability of places in other programs or because of stringent program intake procedures.

3. Recruitment procedures are sometimes alienating to the disadvantaged clients. The content of brochures in terms of language level, formality and sometimes the pictures used, may help to discourage the disadvantaged from enrolling in higher level programs.

Recommendations

1. Since the home environment plays a significant role in the educational and occupational choices of students, and since the children of disadvantaged backgrounds are denied the privilege of a career enriching home environment, some attempt must be made to educate parents about their role in the educational and occupational choices of their children. This will encourage parents to employ the necessary measures which will supplement the experiences children have at home.

Social service agencies should implement a career social service program with the responsibility for conducting career outreach services to disadvantaged families. It may be possible for such a program to be initiated by the career guidance unit in the Department of Education or the Division of Vocational Education.

2. Disadvantaged vocational students should receive career counseling to enable them to make program choices that are consistent with their academic potential.

3. Recruitment procedures should be structured to encourage disadvantaged clients to enroll in program which lead to high-paying occupations.,

4. Support services such as IMTS should be expanded so that students can acquire the prerequisite competencies that are necessary for success in high level programs.

If disadvantaged students who are enrolled in Vo Ed are to benefit from the educational resources that are available to them, some systems must be put in place to make up for the deficits that result from the influences of their social and economic background. Most of the impact can be made by ensuring that the students have the proper information, experiences and exposures before pursuing an occupational path. This, however, is a large undertaking for the Vocational Education Community. Instead, measures must be taken to ensure that the Vo Ed delivery system affords the disadvantaged maximum opportunity to succeed. Opportunities for success do not come from channeling students into programs based on diagnostic costs, but on helping them to understand themselves,

helping them to understand the world of work, and creating for them necessary structures that will assist them in overcoming their deficits.

REFERENCES

REFERENCES

Amos, W.E. and Grambs, J.D. (1968) Counseling the Disadvantaged Youth. Englewood Cliffs: Prentice-Hall, Inc.

Deutsch, M., et al. (1967) The Disadvantaged Child. New York: Basic Books, Inc.

Dillard, J.M. and Campbell, N.J. (1981) Influence of Puerto Rican, Black, and Anglo Parents' Career Behavior on their Adolescent Children's Career Development. The Vocational Guidance Quarterly. December.

DiSabatino, M. (1976) Psychological Factors Inhibiting Women's Occupational Aspirations and Vocational Choices: Implications for Counseling. The Vocational Guidance Quarterly, September, 43-49.

Drucker, P.F. (1969) The Age of Discontinuity. New York: Harper and Row.

Edwards, T.B. and Webster, S.W. (1963) Coorelates and Effects of Ethnic Group Identification in Department of HEW's Welfare Administration. Children Bulletin Ao 17. Washington, D.C.: Government Printing Office.

Forer, B.R. (1953) Personality Factors In Occupational Choices. Educational and Psychological Measurement, 13, (3), 361-366.

Galinsky, D.M. (1966) Vocational Choice As a Focus of the Identity Search. Journal of Counseling Psychology, 13, (1), 89-92.

Ginzberg, E.S.W. Ginsburg, Axelvad, S. and Herma, J.C. (1951) Occupational Choice: An Approach to a General Theory, New York: Columbia University Press.

Gordon, E.W. (1965) Characteristics of the Socially Disadvantaged Child. Review of Educational Research, 35, 377-388.

Gordon, E.W. (1974) Vocational Guidance: Disadvantaged and Minority Populations in E.L. Herr (Ed.) Vocational Guidance and Human Development. Boston: Houghton Mifflin Co.

Gottfredson, L.S. (1981) Circumscription and Compromise: A Developmental Theory of Occupational Aspirations. Journal of Counseling Psychology Monograph, 28, (6), 545-579.

Grites, J.O. (1962) Parental Identification in Relation to Vocational Interest Development. Journal of Educational Psychology, 53, (6), 262-270.

Haller, A.O. and Butterworth, G.E. (1960) Peer Influences on Levels of Occupational and Educational Aspiration. Social Forces, 38, (4), 289-295.

Herr, E.L. (1974) Vocational Guidance and Human Development. Boston: Houghton Mifflin Co.

Herr, E.L. and Cramer, S.H. (1979) Career Guidance Through the Life Span: Systematic Approaches. Boston: Little, Brown and Co., Inc.

Hersey, P. and Blanchard, K. (1982) Management of Organizational Behavior: Utilizing Human Resources. Englewood Cliffs: Prentice-Hall, Inc.

Holland, J.L. (1966) The Psychology of Vocational Choice. MA: Blaisdell, Waltham.

Hollingshead, A.B. (1949) Elmtown's Youth: The Impact of Social Classes on Adolescents. New York: John Wiley and Sons, Inc.

Kirchner, E.R. and Yondracek, S.I. (1974) Vocational Development in Early Childhood: An Examination of Young Children's Expression of Vocational Aspirations. Journal of Vocational Behavior, 5, 251-260.

Korman, A.K. (1966) Self-Esteem Variables In Vocational Choice. Journal of Applied Psychology, 50, (6), 479-486.

LoCasio, R. (1968) Continuity and Discontinuity in Vocational Development Theory. Personnel and Guidance Journal, 46, 844-885.

Malnig, L.R. (1967) Fear of Paternal Competition: A Factor in Vocational Choice. Personnel and Guidance Journal, 46, (3), 235-239.

Maston, R.E. (1976) Careers of the Future: Education for Preferable Futures. Washington, D.C.: Futuremics, Inc.

Matthews, E.E. (1974) The Vocational Guidance of Girls and Women in the United States in Edwin L. Herr (Ed.) Vocational Guidance and Human Development. Boston: Houghton Mifflin Co.

Moore, K. and Veres, H. (1976) Traditional and Innovative Career Plans of Two-Year College Women. Journal of College Student Personnel, January, 34-38.

Murray, H.A. (1938) Explorations in Personality. New York: Oxford University Press.

Osipow, S.H. (1983) Theories of Career Development. Englewood Cliffs. Prentice-Hall, Inc.

Owens, R.G. (1981) Organizational Behavior in Education. Englewood Cliffs: Prentice-Hall, Inc.

Plata, M. (1975) Stability and Change in the Prestige Rankings of Occupations Over 49 Years. Journal of Vocational Behavior, 6, 95-99.

Rodman, H. and Voydanoff, P. (1978) Social Class and Parents' Range of Aspiration for Their Children. Social Problems, 25, 333-344.

Roe, A. (1956) The Psychology of Occupations. New York: John Wiley.

Roe, A. (1957) Early Determinants of Vocational Choice. Journal of Counseling Psychology, 4, (3), 212-217.

Rosenberg, M. (1979) Conceiving the Self. New York: Basic Books, Inc.

Sewell, W.H. and Hauser, R.M. (1980) The Wisconsin Longitudinal Study of Social and Psychological Factors in Aspirations and Achievements. Research in Sociology of Education and Socialization, 1, 59-99.

Sewell, W.H. and Shah, V.P. (1967, August) Social Class, Parental Encouragement and Educational Aspirations. Paper presented at the 62nd Annual Meeting of the American Sociological Association, San Francisco.

Smith, E.J. (1975) Profile of the Black Individual in Vocational Literature. Journal of Vocational Behavior, 6, 41-59.

Stevic, R. and Uhlig, G. (1967) Occupational Aspirations of Selected Appalachian Youth. Personnel and Guidance Journal.

Super, D.E. (1953) A Theory of Vocational Development. The American Psychologist, 8, 185-190.

Super, D.E. (1957) The Psychology of Careers. New York: Harper and Row.

Super, D.E. (1963) Career Development: Self Concept Theory. New York: College Entrance Examination Board.

Tiedeman, D.V. (1961) Decision and Vocational Development: A Paradigm and Its Implications. Personnel and Guidance Journal, 40, 15-20.

Tseng, M.S. and Carter, A.R. (1970) Achievement Motivation and Fear of Failure as Determinants of Vocational Choice, Vocational Aspiration, and Perception of Vocational Prestige. Journal of Counseling Psychology, 17, 150-156.

Whiteley, J.M. and Resnikoff, A. (1978) Career Counseling. Monterey: Brooks/Cole Publishing Co.

Wylie, R.C. (1963) Children's Estimates of Their School Work: Ability As a Function of Sex, Race, and Socio-Economic Level. Journal of Personality, 31, 203-224.

APPENDICES

APPENDIX 1

Appendix 1

DEFINITIONAL CRITERIA

[1]
Low Level-High Level Program Criteria:

1. Academic entrance requirements (test scores).
2. Course prerequisite requirements.
3. Duration of program.
4. Open-entrance/open-exit or lockstep program design.
5. Cost of supplies, materials, texts, etc.
6. Type of degree or certificate awarded upon completion of program.
7. Placement potential.
8. Salary when employed after completion of program.
9. Ease/difficulty of curriculum.

[2]
Criteria for Disadvantagement:

The disadvantaged groups will include minorities, females, non-English proficient and the socio-economic and academically disadvantaged. Criteria for socio-economic disadvantagement include: (1) participation in work-study or receiving financial aid and (2) receipt of Government entitlements. Criteria for academic disadvantagement include: (1) enrollment in IMTS (Individualized Manpower Training) and (2) enrolled in other remedial programs.

APPENDIX 2

IDVE STATUS

APPENDIX 2

ID NO.

OCCUPATIONAL ASPIRATIONS QUESTIONNAIRE

This questionnaire requests information which will allow us to understand your choice of Vocational Programs and your choice of occupations. It is divided into four sections: (1) Program Characteristics, (2) Educational Background, (3) Vocational/Occupational Characteristics, and (4) Personal Characteristics. Please read the instructions and questions very carefully and try to respond as accurately as you can.

PROGRAM CHARACTERISTICS

1. In what Vocational Program are you presently enrolled?
_____

2. How long is this program? (Choose one)
___(clock hrs.) ___(sem. hrs.)

3. How much of the program have you completed?
___(clock hrs.) ___(sem. hrs.)

4. Why did you enroll in this program? (Circle all responses that apply)

a. Had always hoped to enter such a program.
b. Had friends enrolled in the program.
c. Heard many good things about the program.
d. High salary potential after completion of program.
e. Convenient hours of work
f. Program offered at convenient time. Check one: Day___ Evening___
g. Program appeared to be an easy program.
h. Program presented a challenge.
i. Program length was attractive. Check one: Long___ Short___
j. Financial assistance was available.
k. Parental encouragement.
l. Friend's encouragement.
m. Counselors/teachers encouragement.
n. Leads to prestigious occupations.
o. To get respect from others.
p. Program was not costly.
q. To become an important person.
r. Other. Please specify:
_____

5. If given the opportunity, would you choose a program other than this?
Yes_____ No_____

6. Did you consider another program but did not enroll in that program?
Yes_____ No_____
(If your answer is Yes, go to to the next Question. If your answer is No, skip to Question #9.)

7. What is the name of the other program you considered?_____

8. Why did you not enroll in this program? (Choose all responses that apply).

a. Program was too expensive.
b. I did not have the ability.
c. Program was too long.
d. Program was too short.
e. Had no friends in program.
f. Program required too much work.
g. Heard bad things about program.
h. Salary after graduation not attractive.
i. Lack of transportation.
j. Could not meet entrance requirements: low test score.
k. Other. Please specify:
_____
_____

9. If the programs at this institution can be divided into "high" and "low" level programs, in which category do you think that your present program will fit? (Circle one).

a. "high"
b. "low". (If your answer is "high, skip to Question #11.)

10. If your answer to the previous question (#9) was "low", why did you not choose a "high" level program? (Circle all that apply)

a. Easier to find jobs after graduating from present program.
b. Did not have the necessary background.
c. Too much work is required.
d. Programs are too long.
e. Programs are too demanding.
f. Friends are not in the program.
g. Was not allowed to enter the program.
h. Did not get the necessary information beforehand.
i. Discouragement from others.
j. Fear of failure.
k. Other. Please specify: _____

Instructions: Respond to the following items by circling the appropriate number to the right of each question which best indicates your feeling about your present program.

11.	How difficult is your present program?	Very difficult	5	4	3	2	1	Easy
12.	Are you pleased with the difficulty level of your program?	Very pleased	5	4	3	2	1	Not pleased
13.	How will you rate your interest in the program?	Very interested	5	4	3	2	1	Not interested
14.	Do you feel that this is a prestigious program?	Very prestigious	5	4	3	2	1	Not prestigious
15.	Do your friends place a high value on this program?	Very high value	4	4	3	2	1	Low value
16.	Do your parents place a high value on this program?	Very high value	5	4	3	2	1	Low value
17.	Would you recommend this program to your friends?	Highly recommended	5	4	3	2	1	Will not recommend
18.	How well are you doing in the program in which you are presently enrolled?	Very good grades	5	4	3	2	1	Very poor grades

****

EDUCATIONAL BACKGROUND

1. Did you graduate from high school? Yes___ No___ (If Yes, continue with the following question. If No, skip to Question #4.)

2. What was the size of your graduating class? _____

3. Where did you rank in your graduating class? _____

4. What was your high school Grade Point Average (G. P. A.)?
   a. 1.5
   b. 2 (C average)
   c. 2.5
   d. 3 (B average)
   e. 3.5
   f. 4 (A average)

5. About how many hours of Vocational courses did you have in high school? (e.g., Industrial Arts, Home Economics Auto Mechanics, Drafting, Typing, etc. _____ hours

6. How many times did you visit the guidance counselor in your junior and senior high school? _____ times

7. How difficult was your high school curriculum? (Circle as appropriate).

   Easy 1 2 3 4 5 Very Difficult

8. What is your present Grade Average? _____ (Omit if you do not currently receive grades).

10. How much difficulty do you think you will experience finding this job? (Circle appropriate number).

None 1 2 3 4 5 Very Much

11. What are your chances of getting the job you really like? (Circle appropriate number).

Good Chance 1 2 3 4 5 Impossible

12. What job do you think you will obtain after graduation?

_____ _____

13. Do you think that this job will be a prestigious occupation?

Not Prestigious 1 2 3 4 5 Very Prestigious

14. To what extent do you think you will be pleased with this job?

Not pleased 1 2 3 4 5 Very Pleased

15. What problems do you expect to encounter in getting the occupation you desire? (Circle as many as appropriate).

a. Discrimination (Check One):
Race__ Sex__ National Origin__ Age__
b. Availability of jobs
c. Too few jobs relating to training
d. Low income
e. Not enough experience
f. Too many persons seeking jobs in the area
g. Place of employment not easy to get to
h. Not enough training
i. Other. Please specify:

_____

16. Where will you go to get information about available jobs? (Check the two most most important sources).

a.__ Don't know (go to next question).
b.__ Guidance Office
c.__ State Employment Office
d.__ Newspapers
e.__ Friends
f.__ Parents
g.__ Teachers
h.__ Other._____

17. Where will you go to get information for continuing your education? (Check the two most important sources).

a.__ Don't know(go to next question)
b.__ Guidance office
c.__ State Department of Education
d.__ Friends
e.__ Parents
f.__ Teachers
g.__ Other:_____

18. What characteristics do you think are necessary to be successful in the occupation of your choice? (Check all that apply).

a.__ Ability to deal with people
b.__ Ability to manipulate data
c.__ Ability to manage stress
d.__ Ability to solve problems
e.__ Assertiveness (Ability to state opinions openly)
f.__ Manual dexterity (Ability to use your hands)
g.__ Ability to remain on task with distractions in environment
h.__ Other. Please specify:

_____

19. What job did you want as an adult while you were in:

Elementary School_____
Junior High_____
Senior High_____

20. What do you look for in the occupation you choose? (Place 1 in front of the most important; 2 in front of the 2nd most important; 3 in front of the 3rd most important).

___a. Activity
___b. Involvement
___c. Pride in work
___d. Need for responsibility
___e. Opportunity to provide services
___f. Prestige
___g. Opportunity to gain respect
___h. Good working conditions
___i. Monetary benefits
___j. Social status

20. Name three jobs that are typically held by individuals in your neighborhood.

1._____
2._____
3._____

How many persons are employed in your immediate family? _____

22. What is the occupation of each family member?
    a. Father: _____
    b. Mother: _____
    c. Brothers: _____
    d. Sisters: _____

23. What are the occupations of three persons whom you admire.

Person's Occupation	Relationship to Person
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____

24. Is there someone whose footsteps you would like to follow?
    Yes___ No___

25. If Yes, what is the relationship of this person to you? _____

    What is this person's occupation?
    _____

26. From whom did you receive the most encouragement in pursuing your chosen occupation?
    a. Parents
    b. Teachers
    c. Friends
    d. Counselor
    e. Other. Please specify:
    _____

27. Have you received any discouragement from any of the following people?
    a. Parents
    b. Teachers
    c. Friends
    d. Counselor
    e. Other. Please specify:
    _____
    f. No one

28. Is there anyone who is dissatisfied with your vocational choice?
    Yes___ No___

29. If your answer to the above question was Yes, please specify the relationship of the person(s) who is dissatisfied with your vocational choice and specify the occupation of the person(s).
    _____
    _____

****

PERSONAL CHARACTERISTICS

1. Check the responses that best describe your present status. Are you:

	Yes	No
a. Enrolled in IMTS	—	—
b. Receiving financial aid	—	—
c. On academic probation	—	—
d. About to drop out of school	—	—

2. What is your age? _____

3. What is your birth order? (Check one).
   1st child___ 2nd child___;
   3rd child___; 4th child___;
   Other _____.

4. Circle the appropriate racial category.
   a. Black
   b. White
   c. Hispanic
   d. American Indian
   e. Other: _____

5. How many persons live in your household?
   _____

6. What is the annual income of your household?
   a. below $5,000 per year
   b. $5,000 - $10,000
   c. $10,000 - $15,000
   d. $15,000 - $20,000
   e. $20,000 - $25,000
   f. $25,000 - $30,000
   g. above $30,000

7. How many times have you changed residence since you started attending elementary school?
   _____

****

(PLEASE CONTINUE ON THE NEXT PAGE

10. How much difficulty do you think you will experience finding this job? (Circle appropriate number).

None 1 2 3 4 5 Very Much

11. What are your chances of getting the job you really like? (Circle appropriate number).

Good Chance 1 2 3 4 5 Impossible

12. What job do you think you will obtain after graduation?

_____

13. Do you think that this job will be a prestigious occupation?

Not Prestigious 1 2 3 4 5 Very Prestigious

14. To what extent do you think you will be pleased with this job?

Not pleased 1 2 3 4 5 Very Pleased

15. What problems do you expect to encounter in getting the occupation you desire? (Circle as many as appropriate).

a. Discrimination (Check One):
Race__ Sex__ National Origin__ Age__
b. Availability of jobs
c. Too few jobs relating to training
d. Low income
e. Not enough experience
f. Too many persons seeking jobs in the area
g. Place of employment not easy to get to
h. Not enough training
i. Other. Please specify:

_____

16. Where will you go to get information about available jobs? (Check the two most most important sources).

a.___ Don't know (go to next question).
b.___ Guidance Office
c.___ State Employment Office
d.___ Newspapers
e.___ Friends
f.___ Parents
g.___ Teachers
h.___ Other._____

17. Where will you go to get information for continuing your education? (Check the two most important sources).

a.__ Don't know(go to next question)
b.__ Guidance office
c.__ State Department of Education
d.__ Friends
e.__ Parents
f.__ Teachers
g.__ Other:_____

18. What characteristics do you think are necessary to be successful in the occupation of your choice? (Check all that apply).

a.__ Ability to deal with people
b.__ Ability to manipulate data
c.__ Ability to manage stress
d.__ Ability to solve problems
e.__ Assertiveness (Ability to state opinions openly)
f.__ Manual dexterity (Ability to use your hands)
g.__ Ability to remain on task with distractions in environment
h.__ Other. Please specify:

_____

19. What job did you want as an adult while you were in:

Elementary School_____
Junior High_____
Senior High_____

20. What do you look for in the occupation you choose? (Place 1 in front of the most important; 2 in front of the 2nd most important; 3 in front of the 3rd most important).

___a. Activity
___b. Involvement
___c. Pride in work
___d. Need for responsibility
___e. Opportunity to provide services
___f. Prestige
___g. Opportunity to gain respect
___h. Good working conditions
___i. Monetary benefits
___j. Social status

20. Name three jobs that are typically held by individuals in your neighborhood.

1._____
2._____
3._____

8. To what extent would you agree with the following statements? Indicate the degree to which each statement reflects the <u>way you feel</u> or the extent to which the statement portrays <u>what you believe</u>.

		Disagree						Agree
a.	I am a competent person.	1	2	3	4	5	6	7
b.	I am a likable person.	1	2	3	4	5	6	7
c.	I do not have the ability to enter most other vocational programs.	1	2	3	4	5	6	7
d.	I will be lucky to complete this program.	1	2	3	4	5	6	7
e.	I feel lucky to be accepted in this program.	1	2	3	4	5	6	7
f.	I can enroll in any vocational program I desire.	1	2	3	4	5	6	7
g.	Knowledge of my abilities is important in making career decisions.	1	2	3	4	5	6	7
h.	I try to choose jobs that fit my personality.	1	2	3	4	5	6	7
i.	I must know what a job requires before choosing.	1	2	3	4	5	6	7
j.	I always seek information to make educational and occupational decisions.	1	2	3	4	5	6	7
k.	I will do anything to succeed in my program.	1	2	3	4	5	6	7
l.	Getting a job in my program area is one of the most important things to me.	1	2	3	4	5	6	7
m.	I will expend all the effort necessary to get the occupation of my choice.	1	2	3	4	5	6	7
n.	I am willing to make sacrifices to obtain the job I desire.	1	2	3	4	5	6	7
o.	I know I will fail this program.	1	2	3	4	5	6	7
p.	This is the only program I could have entered.	1	2	3	4	5	6	7
q.	Opportunities for success are difficult to come by.	1	2	3	4	5	6	7
r.	I try to avoid situations where I may experience failure.	1	2	3	4	5	6	7
s.	I seek out situations in which I know I can be successful.	1	2	3	4	5	6	7
t.	I get along well with my parents.	1	2	3	4	5	6	7
u.	I think I am successful in school.	1	2	3	4	5	6	7
v.	This program is my ticket to a better life.	1	2	3	4	5	6	7
w.	When I graduate from this program, I will have a higher social status.	1	2	3	4	5	6	7
x.	What I learn in the program in which I am presently enrolled will help me to do my job when I become employed.	1	2	3	4	5	6	7
y.	I am capable of coping with most problems that may arise.	1	2	3	4	5	6	7

THANK YOU FOR YOUR TIME. WISH YOU SUCCESS IN YOUR PROGRAM!

APPENDIX 3

PROCEDURES FOR ON-SITE VISITATION

Pre-Visit Responsibilities:

Before each site visit, the project staff will, with the cooperation of the coordinator at each institution, accomplish the following:

1. Obtain and acknowledge permission to collece data at the institution. With the acknowledgement letter, include a copy of the questionnaire and a copy of the data collection procedures.

2. Select the programs at the institution from which students will be identified for responding to the questionnaire. At least four programs will be selected from each institution. Two of these programs will be "high level" programs and two will be "low level" programs.[1]

3. Contact on-site coordinator and obtain information on the programs selected.

   a. Whether the "high" or "low" level labels are appropriate.
   b. Enrollment in these programs.
   c. List of names of students enrolled in these programs.
   d. Name of instructor responsible for the program.
   e. If possible, identification of the disadvantaged students[2] in each program.

4. Obtain the names of the following school personnel: Guidance Counselor, IMTS, Occupational Specialist, Financial Aid Officer.

5. Schedule the day and time for the site visit. Check with the site coordinator to confirm the date and time designated.

6. When the list of students is obtained from the institution, randomly select students for the holdout sample.

7. Request cooperation from the site coordinator to establish contact with themembers of the holdout sample.

8. Obtain information from site coordinator as to the best procedure for data collection (Alternative A, B, or Other). See #3 below.

Site Visitation:

1. Arrive on site at predesignated date and time. Contact site coordinator for briefing and to identify the location for data collection.

2. Collect appropriate policy documents at the site. Documents are to include:

a. Catalog.
b. Information on recruitment and admission policies.
c. Any reports developed on the disadvantaged.
d. Financial aid application.

3. Collect data from students. (Note: The questionnaire takes between 35 minutes and 1 hour to be administered.)

   a. Alternative A: Students are assembled in one location by program area; or students representing all programs are assembled in one location.

      1. Monitor states the purpose of the study and reads instructions.
      2. Names of individuals in the holdout sample read, and these students are requested to assemble in one location.
      3. Questions administered with the ID Card.
      4. ID Card filled out and the card number is noted on the questionnaire.
      5. ID Cards collected by monitor.
      6. Students respond to the questionnaire.
      7. While students are responding to the questionnaire, members of the holdout sample will be notified of the nature of their participation and their names and addresses will be recorded.
      8. Questionnaires collected.

   b. Alternative B: Students who are in a program area (or in similar program areas) are assembled to take a common core course. (Use same data collection procedure, but code "high" or "low" level from the program designation on the questionnaire. Also, check original list to note the number of original respondents present in class).

      *Same procedures as Alternative A, 1-8.

4. Chat briefly with other personnel at the institution: IMTS, Counselors, etc.

[1]Low Level-High Level Program Criteria:

1. Academic entrance requirements (test scores)
2. Course prerequisite requirements.
3. Duration of program.
4. Open-entrance/open exit or lockstep program design.
5. Cost of supplies, materials, texts, etc.
6. Type of degree or certificate awarded upon completion of program.
7. Placement potential.
8. Salary when employed after completion of program.

9. Ease/difficulty of curriculum.

[2]Criteria for Disadvantagement

The disadvantaged groups will include minorities, females, non-English proficient and the socio-economic and academically disadvantaged. Criteria for socio-economic disadvantagement include: (1) participation in work-study or receiving financial aid and (2) receipt of Government entitlements. Criteria for academic disadvantagement include: (1) enrollment of IMTS (Individualized Manpower Training) and (2) enrolled in other remedial programs.

[3]Holdout Sample:

The Holdout Sample constitutes 10% of the total number of students enrolled in a given sampled program.

NOTE: Project staff is willing to modify the data collection procedures at the institution so that it will be convenient for those who are involved or affected. When we call to schedule our visit, we will elicit ideas that will make the process least disruptive.

APPENDIX 4

UNIVERSE OF OFFERINGS IN AREA VOCATIONAL TECHNICAL CENTERS FROM WHICH PROGRAMS WERE SAMPLED

LOW LEVEL COURSES	HIGH LEVEL COURSES
Agriculture	
Agricultural Machine & Equip. Operator	
Agribusiness & Natural Resources Coop	
Horticulture	
Landscape Operations	
Landscape Maintenance	
Livestock Production	
Natural Resources & Wildlife Production	
Nursery Assistant	
Nursery Garden Center Operations	
Nursery Operations	
Distributive Education	
Careers in Banking	Import/Export Practices
Cashiering/Sales People Checking	Marketing and Management
Cooperative Business Education	Management & Supervisory Development
Distributive Education	Real Estate
Employability Skills	
Hotel, Motel, & Front Ofc. Procedures	
Industrial Cooperative Education	
Occupational Exploration	
Principles of Retail Merchandising	
Retail Merchandising	
Specialized Clothing	
Textile and Clothing	
Ticketing	
Travel Agency Operations	
Teller Training	
Waiter/Waitress Mixology	
Work Evaluation	
Work Adjustment	
Health	
Dental Assisting	Emergency Medical Technician
Dietetic Assistant Technology	Medical Surgery Technician
Health Service Aide	Medical Record Transcriptions
Hospital Housekeeping	Medical Laboratory Technician
Medical Office Assistant	Nurse's Aide
	Operating Room Technician
	Ophthalmic Technician
	Optometric Assistant
	Paramedic
	Physical Therapy
	Practical Nursing
	Respiratory Therapy
	Secretary, Medical
	Surgical Technology

LOW LEVEL COURSES	HIGH LEVEL COURSES
Home Economics	
Adult Basic Education	Fashion Design/Flat Pattern
Apparel Design	Interior Design
Apparel Manufacturing	
Child Care Services Guidance & Mgmt.	
Child Development	
Clothing Production	
Cooking and Baking	
Custom Dressmaking	
Custodial Services	
Drapery Construction	
Family Living	
Fashion/Headling Merchandising	
Floral Design and Food Production and Mgmt. Services	
Home Furnishings	
Office	
Accounting Clerk I & II	Advertising Manager
Accounting Machines	Advertising Assistant
Bookkeeper	Administrative Assistant
Business Data Processing	Basic Programming
Business Communications	Computer Operator
Business English	Court Reporting
Business Math	Data Processing (Introductory)
Business Office Machines	Digital Techniques
Business Education	Dictation and Transcription
Clerical Occupations	Key Punch
Clerk Typist	Medical Secretary
File Clerk	Payroll Procedures and Taxes
Front Office Procedures	Paralegal-Legal Assistant
General Office Clerk	Secretary (Admin., Medical, Legal)
Hospital Ward Clerk	Secretary (Executive)
Message Technology	Transcribing Machine Operation
Office Practice	Word Processing
PBX Operator	
Receptionist	
Recordkeeping	
Secretary (General)	
Shorthand	
Typing	
Ward Clerk	
Trade and Industrial	
	Air Conditioning and Refrigeration
Air Cond., Tune-up & Electrical Systems	Architecture and Civil Engineering
Auto Front End & Brakes &	Aviation Mechanics
Automotive Mechanics	Avionics
Auto Body Repair & Refinishing	Cartography
Auto Trim Specialty	Commercial Advertising Artist

LOW LEVEL COURSES	HIGH LEVEL COURSES
Trade and Industrial (continued)	
Appliance Repair	Cosmetology
Barbering	Diesel Agricultural Machines
Brake and Front End Mechanics	Electrical Wiring
Building Construction	Engineering Aide
Building Maintenance	Fork Lift Mechanics
Business Machine Repair	Graphics Technology
Boat Building	Heavy Equipment Mechanics
Cabinet Making & Woodworking	Industrial Design
Carpentry	Industrial Electronics
Commercial Vehicle Driving	Industrial Electricity
Commercial Refrigeration	Industrial Drafting
Culinary Arts	Insurance Education
Drafting	Internal Design Technology
Electronics Assembly	Jewelry Design
Electronics Technology	Linear Integrated Circuits
Furniture Upholstery	Laser Electro-optics
Gasoline Engines Mechanics	Machine Shop
Golf Course Equipment Maintenance	Marine Engine Mechanics
Heavy Equipment Operator	Microcomputer & Microprocessors
Laboratory Aide	Nuclear Pipe Welding
Meat Cutting	Outboard Marine Mechanics
Masonry	Radio and Television Servicing
Motorcycle Mechanics	Radio Broadcasting
Parts Counterman & Management Training	Reprographics
Plumbing and Pipe Fitting	Refrigeration
Photography	Surveying Techniques
Private Security Guard	Sheet Metal
Sewing (Alterations)	Solar Energy Technology
Small Engine Mechanics	Television Studio Operations
Telephone Communications Techniques	Truck and Bus Mechanics
Timber Harvesting (Marketing)	Technical Illustration
Truck Driver Training	Tractor Mechanics
Turfgrass Management & Nursery Operations	Watchmaking and Watch Repair
Typesetting	
Vehicle Driving-Commercial	

Appendix 5

UNIVERSE OF OFFERINGS IN COMMUNITY COLLEGES
FROM WHICH PROGRAMS WERE SAMPLED

LOW LEVEL COURSES	HIGH LEVEL COURSES	
Agriculture		
Agriculture Inspector	Agribusiness Mid-Management	Farm Management
Beef Production	Agribusiness Technology	Forest Engineering Technology
Citrus Production	Agricultural Business	Forest Technology
Forestry	Agricultural Mechanics	Golf Course Operation
Nursery Operations	Agriculture	Landscape Design & Sales
Ornamental Horticulture	Animal Science	Orn. Horticulture & Landscaping
	Assoc. In Science-Agriculture	Orn. Hort. & Landscaping Mgmt.
	Biological Parks	Park Technology
	Citrus Technology	Plant Science
	Crop Technology & Production	Ranch Management
Distributive		
Bank Teller Training	Banking	Institutional Food Service
Beef Production	Business Management (Banking)	Insurance
Cashier Sales Checker	Business Mgmt. (Real Estate)	Insurance Qualification
Hotel/Motel	Business Marketing/Distribution	Marketing & Mid-Management
Insurance Agent	Commercial Banking	Mid-mgmt. In Business & Industry
Merchandising	Cooperative Dist. & Marketing	Mid-mgmt. in Marketing/Retail
Storekeeping & Parts Sales	Culinary Arts & Hospital. Mgmt.	Mid-mgmt. in Hotel/Motel Mgmt.
Travel Agency Operation	Ditsrib. & Mktg. (Hotel/Motel)	Mid-mgmt./Mgmt. Specialization
Vending Facilities Mgmt.	Distrib. Mid-management	Mid-mgmt./Marketing Specializ.
	Fashion Merchandising	Real Estate
	Food Service Management	Sales-Marketing-Retailing
	General Business/Banking	Savings and Loan
	General Business/Real Estate	Transportation
	Hospitality Management	Travel and Tourism
	Hotel/Motel Management	
Health		
Emergency Med. Tech. I	Allied Health & Medical Service	Medical Assisting
Emergency Med. Tech. II	Associated Degree Nursing	Medical Lab Services
Health Service Aide	Cardiopulmonary Technician	Medical Lab Technician
Hospital Houskeeping Mgmt.	Dental Assisting	Medical Records Technology
Human Services Aide	Dental Assisting Management	Medical Records Transcriber
Medical Term/Transcription.	Dental Asst. Ed. & Public Health	Mental Health Technician
Nurse's Aide	Dental Hygiene	Mental Retardation
Nurse Assistant Aide	Dietetic Technician	Nuclear Medicine Technician
Nurse Assisting	Emergency Medical Care	Nursing
Ward Clerk	Emergency Medical Services	Nursing A.S. Degree
	Emergency Medical Technology	Nursing Bridge
	Human Services	Nursing, R.N.
	Human Services Technology	Nursing Technician
	LPN	Paramedic

LOW LEVEL COURSES	HIGH LEVEL COURSES	
	Practical Nursing	Radiological Technology
	Practical Nursing--CR Certi.	Respiratory Therapy
	Practical Nursing--NC Certi.	Surgical Room Technologist
	Radiation Protection Technology	Surgical Technologist

Home Economics

Child Care & Guidance	Child Care	Fashion
Clothing Construction	Child Care Management	Fashion Design
Clothing Management Produc. & Service	Child Care Service	Food Service & Management Tech.
	Child Day Care	Food Service Technology
Clothing Prod. & Services	Child Development	Home Economics
Consumer Home Economics	Clothing & Design	Homemaking
Food Service	Commercial Food Services	Interior Design Technology
Home Furnishings/Drapery Construction	Early Childhood Education	
Home Services--Handicapped		
Interior Design/Decorator Service		
Supervised Food Service Worker		

Office

Basic Typewriting	Accounting	Executive Secretary
Bookkeeping	Accounting Technology	Financial Management
Business--Data Processing	Administrative Secretarial	General Business
Clerical	Business	General Business-Accounting
Computer Operations	Business--Court Personnel	Jr. Executive--Marketing Mgmt.
Court Reporter	Business Management	Legal Secretary
Dispatcher Training	Business--Office Administration	Management
Essential Office Skills	Business-Secretar/Sce./Leg.Sec.	Medical Secretary
General Office Clerk	Clerical Science	Mid-Management
Income Tax	Clerical Studies	Office Administration
Key Punch	Clerk General	Office Education/Bookkeeping
Key Punch Operator	Clerk Typist	Office Education--Leg.Secretary
Machine Shorthand	Commercial Data Processing	Office Education/Secretary
Office Occupation	Computer Programming	Office Education/Word Process.
Receptionist	Computer Science	Postal Service Management
Secretarial Certificate	Court Reporting	Secretarial
Stenographer	Data Processing Technician	Secretarial Science
Stenographic	Electronic Data Processing	Word Processing
Stenographer/Secretary		
Stenography		
Vocational Office Education		
VOE--Clerk Typist		
VOE--Stenographic		

LOW LEVEL COURSES	HIGH LEVEL COURSES	
Trade and Industrial		
Air Cond & Heating Mechanic	Air Conditioning/Refrigeration	Welding
Air Cond. & Appliance Repair	Air Cond., Heating & Refrider.	Machine Shop Technician
Solar/Harv. Technology	Building Construction--Air Conditioning, Refrig, Heat	Machine Shop Management
Air Cond. & Refr. Mechanic	Harv. Technology	Welding & Fabric Technology
Air Conditioning Repairs	Air Conditioning--Eng. Technol.	Solar Technology
Appliance Service	Environmental Pollution Control	Civil Engineering Technician
Auto Performance Mechanic	Automotive Mechanics	Biochemical Equip. Tech.
Auto Mechanic Specialist	Automotive Service Technician	Mechanical Engineering Tech.
Supervisory Developer	Auto Perf. Technology	Cosmetology
Industrial Mgmt. Technology	Automotive Body Repair & Refin.	Small Gas Engines Management
Printing	Auto Body Repair	Cabinet Making & Millwork
Graphics	Electronic Tech. (Electromech.	Architectural Woodworking
Printing & Lithography	Industrial Supervision & Mgmt.	Quality Control & Relaibility
Offset Printing Services	Industrial Service Management	Quality Control
Marine Electricity	Industrial Mid-Management	Technical Writing
Marine Outside Machinist	Printing/Graphic Arts	Air Traffic Management
Marine Pipefitting	Graphic Design Technology	Commercial & Advertising Arts
Marine Shipfitting	Offset Printing Management	Commercial Arts
Electrical Wiring	Eng. Draft Tech. *Illus)	Interior Design Tech.
Electrical Trades	Technical Illustration	Interiors
Electronic Assembly	X-Ray Engineering Technology	Industrial Photography Tech.
Telephone Trades	Civil Drafting	Professional Photography
Telephone Communications	Vocational Drafting	Building Construction Tech.
Radio & Television Repairs	Industrial Arts	Building Construction
Computer & Electronics	Electrical Eng. Technician	Building & Contracting Tech.
Marine Welding	Electronics Technician	Constru. Materials Merchandising management
Marine Electricity Technol.	electronics	Concrete Technician
Marine Engines	Industrial Electronics	Arch & Building Constr.Tech.
Gasoline Engines	Consumer Electronics	Construction Technology
Marine Diesel	Electrical Eng. Techn. (Commu)	Civil Engineering Tech.
Machine Tools	Elect. Eng. Technician (Digital)	Civil Technology
Automotive Machining	Electronics Technician (Gen.sys)	Diesel Mechanic
Machine Shop	Electronics Techn--Medical Sys.	Eng. Draft Technician(Design)
Machine Shop II	Marine Propulsion	Drafting
Auto Machine Shop	Maching Technology	Drafting & Design Tech.
Precision Sheet Metal		Architectural Drafting
Sheet Metal		Manufacturing Technology
Welding & Fabrication		
Tool & Die Making		
Commercial Cooking		
Small Gas Engines		
Gas Engine Mechanic		
Marine Mechanics		
Marine Engine Repair		
Power Plant Operator		
Upholstery		
Reupholstery & Repair Aide training		
Electromechanical Assembly		

LOW LEVEL COURSES	HIGH LEVEL COURSES	
Public Service		
Wastewater Treatment	Fire Technology	Recreation
Firefight. Min. Standards	Fire Science	Recreational Leadership
Firefighting	Fire Science & Prevention	Social Service
Basic Recruit (Fire)	Fire Supervision & Mgmt.	Social Services Technology
Basic Recruit (Vol)	Fire Science Technology	Human Services
Paralegal	Fire Prevention & Investigation	Human Services Aide
Wastewater Operator	Fire Protection Engineer	Environmental Science Techn.
Water Treatment Operator	Police Administration	Environmental Cont. Engineer Technician
Basic Police Auxiliary	Criminalistics	
Basic Recruit Training/ Law Enforcement	Criminal Justice	Criminal Justice--Law Enforce.
	Police Science Technology	Law Enforcement
Basic Correct.Recruit. Train.	Police Science	Criminal Justice (Police Administration)
Basic Recruit Training (Police Officer)	Corrections	
	Basic Law Enforcement	Law Enforcement Technology
PSTC Auxiliary Training	Corrections Counseling	Criminal Justice Technology
Bail Bondsperson	General Business & Paralegal	Criminal Justice (Sec/Safe Management)
Basic Security Officers Training	Legal Assistant	
	Legal Assistant Technology	Corrections Employee
Basic Corrections	Education Technology (library)	Corrections Technology
Correctional Minimal Standa.	Instructional Associate	Criminal Justice Corrections
Water & Sewage Plant Communication	Teacher Aide	Criminal Corrections
	Career Assoc. in Special Ed.	Environmental Marine Science
Water Treatment		Marine Lab Technology
Water & Wastewater Plant Operator		Oceanographic Technology
		Church Music

APPENDIX 5

APPENDIX 6

Appendix 6

SAMPLE SELECTION FOR HIGH AND LOW LEVEL PROGRAMS
BY PROGRAM AREAS

PROGRAMS	Number of Programs at Community Colleges		Number of Programs at Area Vocational-Technical Ctrs.		Total Available Programs		Number of Programs Selected	
	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi
Agriculture	6	20	10	0	16	20	5	5
Distributive Education	9	30	18	4	27	34	8	8
Health	10	36	5	14	15	50	5	11
Home Economics	10	15	15	2	25	17	7	4
Office	24	36	25	17	49	53	14	12
Trade and Industrial	67	74	41	39	108	113	31	25
Public Service	21	44	4	3	25	47	7	11
Total	147	255	118	79	265	334	77	76

APPENDIX 7

APPENDIX 7

LIST OF INSTITUTIONS WHICH PARTICIPATED
IN THE CAREER ASPIRATIONS STUDY

Institution	Code No.
Atlantic Vocational Technical Center	01
Bradford-Union Area Vocational Technical Center	02
Brevard Community College	03
Chipola Junior College	06
Erwin Vocational-Technical Center	09
Florida Junior College at Jacksonville	10
Thomas P. Haney Vo-Tech	13
Lake City Community College	15
Lake County Area Vocational Technical Center	16
Lee County Vocational-Technical Center	17
Lindsey-Hopkins Educational Center	18
Lewis M. Lively Area Vocational-Technical Center	19
Manatee Area Vocational-Technical Center	20
Miami Lakes Technical Education Center	21
Mid-Florida Technical Institute	22
North Florida Junior College	24
North Technical Education Center	25
Orlando Vocational Technical Center	27
Pinellas Vocational Technical Institute	29
St. Augustine Technical Center	30
St. Petersburg Vocational Technical Institute	31
Sarasota County Vo-Tech Center	33
Sheridan Vocational-Technical Center	35
South Florida Junior College	36

Institution	Code No.
South Technical Education Center	37
Suwannee-Hamilton Area Vocational Technical Center	39
Taylor County Area Vocational-Technical Center	40
Maynard A. Traviss Vocational Technical Center	41
Washington-Holmes Area Vocational Technical Center	42

APPENDIX 8

APPENDIX B

PROGRAMS SAMPLED FROM THE UNIVERSE OF PROGRAMS IN AREA VOCATIONAL TECHNICAL CENTERS AND COMMUNITY COLLEGES

Agriculture

Low Level (5)

1. Agribusiness and Natural Resources Coop.
2. Horticulture
3. Landscape Maintenance
4. Livestock Production
5. Nursery Garden Center Operations

Alternate Programs

1A. Agric. Machine & Equipment Operation
2A. Agricultural Inspector
3A. Forestry

High Level (5)

1. Biological Parks
2. Citrus Technology
3. Crop Technology and Production
4. Farm Management
5. Forestry Engineering Technology

Alternate Programs

1A. Agribusiness Mid-Management
2A. Agricultural Mechanics
3A. Landscape Design and Scales

Distributive Education

Low Level (8)

1. Hotel, Motel and Front Ofc. Procedures
2. Teller Training
3. Work Evaluation
4. Work Adjustment
5. Beef Production
6. Merchandising
7. Vending Facilities Management
8. Employability Skills

Alternate Programs

1A. Careers in Banking
2A. Cooperative Business Education
3A. Travel Agency Operation
4A. Cashier Sales Checker

High Level (8)

1. Culinary Arts and Hospitality
2. Distribution and Mktg. (Hotel/Motel Mgt.)
3. Fashion Merchandising
4. Insurance
5. Mid-Mgt. in Hotel/Motel Management
6. Import/Export Practices
7. Management & Supervisory Development
8. Real Estate

Alternate Programs

1A. Marketing and Management
2A. Food Service Management
3A. General Business/Real Estate
4A. Institutional Food Service

Health

Low Level (5)

1. Dietetic Assistant Technician
2. Health Service Aide
3. Medical Office Assistant
4. Hospital Housekeeping Management
5. Ward Clerk

High Level (11)

1. Dental Hygiene
2. Dietetic Technician
3. Human Service Technician
4. Medical Assisting
5. Mental Health Technician
6. Nuclear Medicine Technician
7. Nursing
8. Respiratory Therapy

Health

High Level (1)

9. Surgical Technician
10. Medical Lab Technician
11. Ophthalmic Technician

Alternate Programs

1A. Emergency Medical Technician I
2A. Health Service Aide
3A. Medical Term Transcriptions
4A. Nurse's Aide

Alternate Programs

1A. Dental Assisting
2A. Emergency Medical Technology
3A. Nursing Technology
4A. Radiation Protection Technology
5A. Optometric Assistant

Home Economics

Low Level (7)

1. Adult Basic Education
2. Apparel Design
3. Child Care Services Guidance & Mgt.
4. Fashion Headline Merchandising
5. Clothing Production Services
6. Food Service
7. Home Furnishings/Drapery Construction

High Level (4)

1. Child Care Management
2. Clothing and Design
3. Fashion
4. Interior Design

Alternate Programs

1A. Apparel Manufacturing
2A. Family Living
3A. Clothing Construction
4A. Consumer Home Economics

Alternate Programs

1A. Commercial Food Services
2A. Early Childhood Education
3A. Homemaking
4A. Interior Design Technology

Office

Low Level (14)

1. Accounting Machines
2. Business Communication
3. Business Math
4. Clerk Typist
5. File Clerk
6. Front Office Procedures
7. Message Technology
8. Office Practice
9. Receptionist
10. Shorthand
11. Dispatcher Training
12. Income Tax
13. Keypunch Operator
14. Voc-Stenographic

High Level (12)

1. Digital Techniques
2. Dictation and Transcription
3. Payroll Procedures and Taxes
4. Secretary/Executive
5. Business Management
6. Commercial Data Processing
7. Data Processing Technology
8. Electronic Data Processing
9. Legal Secretary
10. Office Education/Word Processing
11. Postal Service Management
12. Secretarial Science

Office

Alternate Programs

1A. Business Education
2A. Basic Typewriting
3A. Business Data Processing
4A. Clerical
5A. Office Occupations

Alternate Programs

1A. Computer Science
2A. Mid-Management
3A. Office Education/Bookkeeping
4A. Advertising Assistant
5A. Computer Operator

Trade and Industrial

Low Level (31)

1. Solar/Harvest Technology
2. Appliance Service
3. Auto Mechanic Specialist
4. Printing
5. Offset Printing Servi[illegible]
6. Marine Electronics
7. Marine Shipfitting
8. Electrical Wiring
9. Telephone Trades
10. Computer and Electron[illegible]
11. Marine Electronics Technology
12. Marine Diesel
13. Welding and Fabrication
14. Tool and Die Making
15. Power Plant Operation
16. Building Cost (Energy Conservation)
17. Auto Trim Specialty
18. Barbering
19. Brake and Front End Mechanic
20. Building Construction
21. Business Machine Repair
22. Boat Building
23. Culinary Arts
24. Furniture Upholstery
25. Gasoline Engine Mechanics
26. Golf Course Equipment Maintenance
27. Meat Cutting
28. Motorcycle Mechanics
29. Parts Counterman & Mgt. Training
30. Private Security Guard
31. Truck Driver Training

High Level (25)

1. Air Conditioning, Heating & Refrig.
2. Automotive Service Technology
3. Industrial Supervision & Management
4. Printing/Graphic Arts
5. X-Ray Engineering Technology
6. Vocational Drafting
7. Industrial Arts
8. Electronics Technology (Digital)
9. Marine Propulsion
10. Welding
11. Solar Technology
12. Civil Engineering Technology
13. Technical Writing
14. Professional Photography
15. Civil Engineering Technology
16. Drafting
17. Avionics
18. Cartography
19. Fork Lift Mechanics
20. Graphics Technology
21. Heavy Equipment Mechanics
22. Outboard Marine Mechanics
23. Radio Broadcasting
24. Surveying Techniques
25. Solar Energy Technology

Alternate Programs

1A. Plumbing
2A. Sheet Metal

Alternate Programs

1A. Linear Integrated Circuits
2A. Truck and Bus Mechanics
3A. Auto Body Repair and Refinishing
4A. Machining Technology
5A. Architectural Woodworking

Public Services

Low Level (7)

1. Criminal Justice Aide
2. Wastewater Treatment
3. Firefighter/Minimum Standard
4. Basic Recruit/Firefighter
5. Basic Police Recruit Training
6. Water & Sewage Plant Communications
7. Water & Wastewater Plant Operation

High Level (11)

1. Law Enforcement
2. Police Administration
3. Legal Assistant
4. Educational Technology (Library)
5. Human Services
6. Environmental Science Technician
7. Corrections Technician
8. Criminal Corrections
9. Oceanographic Technician
10. Marine Lab Technician
11. Fire Science and Prevention

Alternate Programs

1A. Water Treatment Operations
2A. Fire-Supervisor and Management
3A. Correctional Minimal Standards

1A. Fire Prevention and Investigation
2A. Basic Police Auxiliary
3A. Recreation
4A. Communication FCC and Repair

Appendix 9

CODE DEVELOPMENT FOR
OCCUPATIONAL ASPIRATIONS QUESTIONNAIRE

CODES USED

DVE - Disadvantaged Status
PGC - Program Characteristics Section
EB - Educational Background Section
PVOC- Personal Vocational-Occupational Characteristics Section
PC - Personal Characteristics Section

Q - Question, usually followed by a question number

1. CODING DVE STATUS:

Column 1: Minority status--PC Question 4

Codes: 1 - White (non-minority)
2 - Black, Hispanic, American Indian or other (minority)

Column 2: Economic disadvantagement

Codes: 1 - Economically disadvantaged
PC Q 5 and 6: 1 member household
annual income $5,000 or below

or Multiple member household
annual income $10,000 or below

or PC Q 1: Response of "yes" receiving financial aid

2 - Not economically disadvantaged
Where responses are not indicated as above

Column 3: Educational disadvantagement

Codes: 1 - Educationally disadvantaged
PC Q 1: on academic probation
enrolled in IMTS

or EB Q 4: High School GPA of 1.5

or EB Q 8: Present grade average (GPA) 2 or below (or equivalent)

2 - Not educationally disadvantaged
Where responses are not indicated as above

Column 4: Sex
Code from ID Cards

Codes: 1 - Femanle
2 - Male

2. CODING VOCATIONAL PROGRAMS

List all vocational programs noted on the Questionnaires, then assign numbers to the list of unduplicated programs. One unduplicated list should result. Check the following questions for program designations.

PGC Q 1
PGC Q 7

3. CODING OCCUPATIONS

List all occupations noted on the questionnaires, then assign numbers to the list of unduplicated occupations. One unduplicated list should result. Check the following questions for occupational designations.

PVOC Q 4	PVOC Q 19	PVOC Q 29
PVOC Q 6	PVOC Q 20	
PVOC Q 8	PVOC Q 22	
PVOC Q 9	PVOC Q 23	
PVOC Q 12	PVOC Q 25	

4. CODING RELATIONSHIPS

List all relationships noted on the Questionnaires, then assign numbers to the listing of unduplicated notation of relationships. One unduplicated list should result. Check the following questions for relationship designations.

PVOC Q 23
PVOC Q 25
PVOC Q 26
PVOC Q 27
PVOC Q 29

5. Coding responses to open-ended questions (i.e., "other" categories to specific questions). Look at each question where "other" is an alternative response. For each question where students responded in this category (volunteers written information) copy the statements indicated. Develop an unduplicated list of responses for each such question. Assign a numerical code to these responses making sure that the numerical codes continue from the pre-designated set of responses. Place categories for each question on a separate page. Check the following questions for responses to open-ended questions.

PGC Q 4	EB Q 9	PVOC Q 1	PC Q 3
PGC Q 8		PVOC Q 15	PC Q 4
PGC Q 10		PVOC Q 16	
		PVOC Q 17	
		PVOC Q 18	

Appendix 10

PERSONAL VOCATIONAL - OCCUPATIONAL CHARACTERISTICS

Question #17: Where will you go to get information for continuing your eduction?

OTHER RESPONSES

Category a: Don't know.

Responses: No responses.

Category b: Guidance Office

Responses: Manatee Junior College.
MJC.
Go to college.
Army.
Junior college
Training officer
Mid-Florida
Vocational rehabilitation counselor.
College catalogs.
Library.
Navy.
Local services.
Technical Institute.
U.C.F.
Financial Aid.
UOA.

Category c: State Department of Education

Responses: No responses.

Category d: Friends

Responses: People in the same field.
On the job.

Category e: Parents

Responses: My husband.

Category f: Teachers.

Responses: No responses

Category g: State agencies.

Responses: Job training.
State board.
VA.
CETA.
Service.
Union.

Category i: Self initiated.

Responses: Self.
Seek.
Around.
Own needs.
Personal research.
Beauty shops and Hairshops.
Related Professions/Jobs.
Myself.
Reading and research.
Bulletin
Observations in various fields.

Category j: Newspapers/Magazines/etc.

Responses: Magazines/newspapers
Through mail.
AST Information.

Category k: Employer.

Responses: Employer.
Industry.

SPECIFICATION OF "OTHER" RESPONSES
BY RESPONSE CATEGORIES

Section of Questionnaire: PROGRAM CHARACTERISTICS

Question #4: Why did you enroll in this program?

Category a: Had always hoped to enter such a program.

Responses:
Program electronically oriented.
What I've always wanted.
Enjoy this type of work.
Help in understanding art or landscaping and types of plants to use.
To learn about plants.
Wanted outside occupation with creative aspect.
Wanted skill that required skillful use of the hands.
Interested in alternative energy.
Program not available in previous geographic area.
To be qualified in interesting line of work.
Become interested in subject matter.
Program excellent followed from previous experience.
Previous work experience.
The only thing I know.

Category b: Had friends enrolled in the program.

Responses: No "other" responses.

Category c: Heard many good things about the program.

Responses: Got to learn teacher better and able to work better without switching classes every hour--able to work at own pace.

Category d: High salary potential after completion of program.

Responses:
To ensure long-range employment.
Make more money. Good employment available.
Growing job outlook.
Job placement.
To get a better job.
To prepare for work.
Job opportunities numerous.
Good future in this area.
Couldn't find a well-paying job/B.A. in Social Science.
Wanted out of Social Science.
Need the good money and good education because I'm a single parent.
To improve education and widen range of job opportunities.
To be financially independent.
Secretarial skills an asset in any field.
Needed something to get a job quickly.
Job security.
Occupation always in demand.
To learn a skill that would save me money.

Category e: Convenient hours of work.

Responses: No "other" response.

Category f: Program offered at convenient time.

Responses: Conflict/work hours

Category g: Program appeared to be an easy program.

Responses: Common sense area
To learn a skill without taking preliminary courses.

Category h: Program presented a challenge.

Responses: Program standard is high.
Program appeared interesting.
To contribute something special to world of electronics.
I like to think.

Category i: Program length was attractive.

Responses: Program isn't long.

Category j: Financial assistance was available.

Responses: MFT Scholarship.
CETA pays me as if I was working.
This program provided an income as well as an educational opportunity.
I made $40 a week for my babysitting.

Category k: Parental encouragement.

Responses: No "other" response.

Category l: Friend's encouragement.

Responses: Husband's encouragement and wanted skill to fall back on.
Many friends in the construction field.
Have a relative in the field and would be able to help him.

Category m: Counselors'/teachers' encouragement.

Responses: Coerced into it by counselor.

Category n: Leads to prestigious occupations.

Responses: No "other" response.

Category o: To get respect from others.

Responses: No "other" response.

Category p: Program was not costly.

Responses: No "other" response.

Category q: To become an important person.

Responses: No "other" response.

Category s: Need for retraining/upgrading.

Responses: Was hurt in previous job (drove tractor-trailer)
Retrain for job.
Rehabilitation.
Physical limitation required I change occupations.
Physical requirements.
Second trade, in case I fail in painting.
Got hurt on job and needed to pay bill and in a pinch.
Job certification.
Trained in this field and was laid off.
To become more effective employee.

Category t: Preferred program had no vacancies/was unavailable.

Responses: Only program opened (wanted auto mechanics)
Rather take welding.
Welding meant more.
Desired program not available.
Not VA-approved.
Didn't have enough credits from high school.
First choice full, and anticipated discrimination in sex in 2nd choice.
I was too young.
Not chosen for admission.
Had no choice.
A loser.

Category u: Personal growth.

Responses: To have a trade.
Support occupational skills.
Personal needs.
Broaden skills and observe teaching materials.
New field different from others.
Self-initiated.
Self-betterment.
Need some kind of specific training.
Gain more knowledge about the field.
Helps me with my drafting.
Waited 30 years--self-employment, self-satisfaction, desire to find my potential.
Self-fulfillment.
To become better educated.
To stay active in life.
This program provided an income as well as an educational opportunity.
Opportunity for learning was available without interfering with raising of family.
Program will bring out hidden talents that'll help in future career.
Lack of job skill.
Wanted to build up my own skill opportunity.
New developing field.

Wanted to receive remuneration according to my worth and not my sex.
Wanted to learn more in this area.
Preparation for more advanced program.
To turn a hobby into a business.
Therapy.

Category v: Hobby/personal project/personal interest.

Responses: Building a home.
Ecology.
Hobby.
To sit on fire department.
Self-employment.
Fix my boat.
To work away from home.
To discover secrets and knowledge of the universe for survival.
Seeking radio license.
Enjoyment--to get a job at space center.
Prove to myself that I could learn.
Learn skill in heavy equipment to beautify my country.
To graduate from high school.
To decide if I wanted a medical career; if it isn't so, what career.

Category w: Training required.

Responses: Part of job training.
Job required it.

Category x: Dissatisfaction with previous program/work, etc.

Responses: Teacher thinks he's the Lord.
Too many high school students enrolled.
Dangerous, "grody" position.
Boredom.
Tired of retail.

APPENDIX 12

SPECIFICATION OF "OTHER" RESPONSES
BY RESPONSE CATEGORIES

Section of Questionnaire: PROGRAM CHARACTERISTICS

Question #8: Why did you not enroll in this program?

Category a: Program was too expensive.

Responses: Couldn't afford tools for the class (auto mechanic)

Category b: I did not have the ability.

Responses: Enrolled before, but didn't complete it.
New math presented problem.
Wasn't mentally ready (bookkeeping)
Not sure I would do it at my age (48)(data processing).
Inconvenient and lack confidence in ability.

Category c: Program was too long.

Responses: Had too much time in this program.
Needed less hours to graduate for drafting, then needed to go into

Started too late in life: need job quickly.
Needed a college degree to work.
Location and money--needed to work earlier.
Didn't want to sit in classroom for six hours.
No time.

Category d: Program was too short.

Responses: No "other" response.

Category e: Had no friends in the program.

Responses: No "other" responses.

Category f: Program required too much work.

Responses: Too many lab reports.

Category g: Heard bad things about program.

Responses: Too dirty and too easy.
Poor teachers in that area.

Category h: Salary after graduation not attractive.

No jobs.
Better opportunity to run my own business.
Thought I would learn more in present program.

Better opportunity in the area.
Market saturated/artists.
This program offers more--I will pay off debts.
More jobs in other fields.
Not much motive in this occupation.
More money in other field.
It gets cold outside (carpentry).
First choice had better hours and benefits upon graduation.
Not considered an employable skill.
Pay and prestige not acceptable for amount of work and abuse.
Not feasible to leave present employment.

Category i: Lack of transportation.

Responses: Bad school bus.

Category j: Could not meet entrance requirements.

Responses: Math scores too low.
Lacked qualifications.
Didn't have prerequisites.
Didn't offer it to high school in attendance.

Category k: Other. Please specifify:

Responses: No "other" response.

Category l: Retraining/upgrading.

Responses: No "other" response.

Category m: Dissatisfaction with programs.

Responses: Didn't get along/teacher.

Category n: Barriers to program entry.

Responses: Only course open.
Course closed.
Not offered at this school.
Program started too late.
Program acceptance only twice a year.
Unable to enter first choice.
CETA wouldn't let me.
Not physically able.
Program started later in the year.
Didn't think I can stand to see blood and open wounds.
Enrolled too late to complete this year.
No financial aid.
General office all CETA had.
No place to live while taking course.
VA won't let you change course.
Nontraditional job for women.
Didn't understand English (Hispanic-nursing)
Course had already strated.
Problem/language.

Category o: Program not challenging.

Responses: Coerced into drafting by counselor.
Wasn't challenging enough.
Other areas more challenging.
Theoretical rather than practical interest.
Not interesting enough.
Not physical enough.
Too boring and repetitive.

Category p: Lacked interest in the program.

Response: Not interesting enough.
Didn't like the courses.
Lost interest.

Category q: Preferred current program.

Responses: Higher interest in this area.
Thought I would learn more in present program.
Wanted to go ahead with auto body repair first.
If things go okay, I will.
I found out the program I'm in.
I like this area better.
I found out about the program I'm in.
Second choice.
More suited for future in business.
Surgical technician more appealing.
Not able to complete both programs.
Chose data instead.
Other program geared toward future.
Data processing had same curriculum.
Wanted out of social science field.
Changed my mind.
Wanted basic knowledge of all office machines before higher administrative programs.
Wanted to devote all time to carpentry.
Didn't like job.
Already enrolled in law enforcement area.

Category r: Lack of self-confidence.

Responses: I was afraid.

Category s: Advised to choose alternative.

Responses: Mom recommended other.
Teacher encouraged otherwise.
Instructor said my health was too bad.
Husband didn't want me to enter police work.
Parents withdrew me from program.
Sheriff said I need more training.

Category t: Lacked knowledge for choosing/undecided.

Responses:
Didn't know what to choose.
Decided on another.
Felt current program was more beneficial.
Not sure it was what I wanted to do.
Wanted to make sure dentistry was the field I'm interested in.
Didn't know CETA paid for it.
Wasn't sure I'd like it.
Program was in its last year.
Will go one-half through first choice to decide if I like second choice.
Didn't know anything about the area.
Didn't know this area existed.
It was a toss, and I lost.

APPENDIX 13

SPECIFICATION OF "OTHER" RESPONSES
BY RESPONSE CATEGORIES

Section of Questionnaire: PERSONAL VOCATIONAL-OCCUPATIONAL CHARACTERISTICS

Question #1: What will you do after completing your program?

Category a: Seek employment/already working.

Responses:
Self-employment.
Auto mechanic.
Try to work up to large commercial company.
Continue working.
Continue my business.
Start own business.
Branch of service--Army, Navy, Marines.
Continue/solar.
Already working.
Join Navy.
Self-employment in this area.
Work at home.
Moving to it.
Move.
Would like to continue school, but can't afford it.
Get contractor's license.
Have full responsibility.

Category b: Pursue further education.

Responses:
Take another class.
Army for further education.
Maybe pursue further education.
Personal knowledge.

Category c: Take a break from school and work.

Responses:
Marry.
Vacation.
Have a baby.
Housewife/mother and later work.
Travel.

Category d: Work while pursuing further education.

Responses:
Work and pursue further education.
Try for A & B.

Category e: Uncertain.

Responses:
Not sure.
Don't know.

Category f: Already retired/retire.

Responses: Already retired.
Part-time, semi-retirement.

Category g: Engage in personal project.

Responses: To build a home.
Complete personal projects.
Build a home.
Hobby.

APPENDIX 14

SPECIFICATION OF "OTHER" RESPONSES
BY RESPONSE CATEGORIES

Section of Questionnaire: PERSONAL VOCATIONAL-OCCUPATIONAL CHARACTERISTICS

Question #18: What characteristics do you think are necessary to be successful in the occupation of your choice?

Category a: Ability to deal with people.

Responses:
Getting along.
Pleasant personality.
Attitude.
Motivation, maturity, manners (also in "k" category).
Always wanted to do something that was helping people.
Timing of ideas and preparation of acceptance.
Good contacts.
Tactful.
Diplomacy.
Smile and be forgiving.

Category b: Ability to manipulate data.

Responses: No "other" response.

Category c: Ability to manage stress.

Responses:
Experience.
Be crazy to put out excellent food on busy nights (also in "g" category).
Pressure.

Category d: Ability to solve problems.

Responses: No "other" response.

Category e: Assertiveness (ability to state opinions openly).

Responses: No "other" response.

Category f: Manual dexterity (ability to use your hands).

Responses: Five arms (surgical technician).

Category g: Ability to remain on task with distractions in environment.

Responses: Be crazy to put out excellent food on busy nights (also in "c" category).

Category h: Technical knowledge/intelligence.

Responses:
Knowing electronics knowledge.
Concentration and intelligence (also in "j" category).
Talent, productivity, output.
Good work, so people will advertise for me.

Ability to learn.
Application of knowledge.
Ability to get the job done.
High IQ.
Ability to deal with blood.
Time to complete design on time.
High math skill.
Common sense.
Talent.
Being able to work.
Increasing speed.
Accuracy.

Category i: Creativity.

Responses: Creativity for hairstyling.
Controlled creativity.

Category j: Ability to concentrate/persistence.

Responses: Concentration and intelligence (also in "h" category).
Listen to instructions.
Persistence.

Category k: Self-initiative.

Responses: Ability to set and achieve personal goals.
Strong ambition and determination.
Desire to succeed.
Motivation, maturity, manners (also in "a" category).

Category l: Experience.

Responses: No "other" response.

Category m: Commitment.

Responses: Love of work.
Willingness to work.

Category n: Self-confidence.

Responses: Desire and confidence in oneself.

Category o: Personal integrity.

Responses: Reliable and trustworthy.
Honesty and dependability.
Responsible and on time.

Category p: Keeping abreast of knowledge.

Responses: Continuing education.

Category q: Patience.

Responses: Patience.

Category r: Ability to work alone.

Responses: Ability to work well alone.

Category s: Organizing skills.

Responses: Organization in units.

Category t: Communication skills.

Responses: Good English.

Category u: Leadership traits.

Response: Leadership traits.

Category v: Physical endurance.

Responses: Physical endurance.
Wear all hats on the street.

Category w: Ability to follow instructions.

Responses: Listen to orders and do work.

APPENDIX 15

SPECIFICATION OF "OTHER" RESPONSES
BY RESPONSE CATEGORIES

Section of Questionnaire: EDUCATIONAL BACKGROUND

Question #9: From whom did you receive advice about your occupational/educational plans while in high school?

Question #26: From whom did you receive the most encouragement in pursuing your chosen occupation?

Question #27: Have you received any discouragement from any of the following people?

Category a: Parents

Responses: No "other" response

Category b: Teachers

Responses: No "other" response

Category c: Counselors

Responses: VA (Military)
From high school
Marine Corps
People from this area visited our high school
Counselor
Pastor
U.S. Army

Category d: Friends

Responses: Friends
Students in this program

Category g: Immediate family/relatives

Responses: Husband/wife
Sister

Category h: Extended family/relatives

Responses: Aunts and uncles
Grandpa
Grandparents

Category i: Employer

Responses: Bossman
County Sheriff
Officers (Law Enforcement)
Contractor
State

APPENDIX 16
PERSONAL VOCATIONAL - OCCUPATIONAL CHARACTERISTICS

Question #16: Where will you go to get information about available jobs?

OTHER RESPONSES

Category a: Don't Know.

Responses: No responses

Category b: Guidance Office.

Responses: MJC.
Military Office.
VC in Jax.
Counselor.
Vocational Rehabilitation Center.
School recommendations.
Choices computer.
VA.
UOA.

Category c: State Employment Office.

Responses: Job Placement Service.
Service.
Occupational listings.

Category d: Newspapers.

Responses: Newspapers.
Advertising.
National Organizations Publications.
Broadcasted magazines.

Category e: Friends.

Responses: KillRoy.
Contacts.
Co-workers.

Category f: Parents.

Responses: Uncle.
Family.

Category f (continued)

Brother-in-law
Word-of-mouth

Category g: Teachers.

Responses: No responses.

Category h: Self initiated.

Responses: Personal interviews.
Seek.
Footwork.
Visiting places I would like to work.
Telephone book.
Builders.
Local contractors.
Companies.
Look myself.
Check around.
Go personally to statistics.
Walk-in.
Send resumes to all potential employers.
Buy a job.
Businesses in my field.
Apply.
Other related businesses.
Any place I can get informed.
Any place.

Category i: Already employed.

Responses: Self-employed.

Category j: Company's personnel office/Union.

Responses: WP Corporation Employment Service.
Personnel Company.
Union
Insurance Company has to provide workman's compensation.
Airlines.

Category k: Private Employment Agency.

Responses: Private employment agency.

APPENDIX 17

SPECIFICATION OF "OTHER" RESPONSES
BY RESPONSE CATEGORIES

Section of Questionnaire: PERSONAL VOCATIONAL-OCCUPATIONAL CHARACTERISTICS

Question #15: What problems do you expect to encounter in getting the occupation you desire?

Category a: Discrimination.

Responses: For who I am.
Social hostility--jealousy.
Doesn't want to hire husband-and-wife teams.
Parents do not like it.

Category b: Availability of jobs.

Responses: Job not in area.
Not enough jobs that I like.
Economy.

Category c: Too few jobs relating to training.

Responses: Field's too new/solar.
Over-qualified.

Category d: Low income.

Responses: Local salary scale too low.
Cheap labor market.

Category g: Place of employment not easy to get to.

Responses: Live too far.
Transportation.
Travel lengths.
Relocation.
Place of employment not easy to get to and not enough training (also under "h" category).

Category h: Not enough training.

Responses: Lack of proper training and experience,resulting in self-employment.
Not enough experience in this area.
Place of employment not easy to get and not enough training (also under "g" category).
Ability in seeking it.
College needs higher technology today.
Could use more training in medical field.

Category i: Discrimination--physical appearance (weight).

Responses: Discrimination against my weight.
Appearance/weight and clothes.

Category m: Discrimination--age.

Responses: Age.
Too young.

Category n: Working conditions unacceptable.

Responses: No promotion.
Hard work.
Work schedule (nursing).

Category o: Resources for own business.

Responses: Money to get equipment.
Problem starting business.
Money to set up.
Will have to advertise to find customers.

Category p: Physical limitations.

Responses: Health.
Physical.
Confined to wheelchair.
My physical disability.
Baby due in September.

END

DEPT. OF EDUCATION

NAT'L INSTITUTE OF EDUCATION

ERIC

DATE FILMED

AUGUST

23 - 1985